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War Tax Free: Institutional Resiliency for War in the United States

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War Tax Free: Institutional Resiliency for War in the United States

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ABSTRACT

The obsolescence of war taxes in the United States after 1968 is a product of the state's increased institutional resiliency for war. Historically, war taxes were raised for purposes of revenue generation for contemporaneous war spending or wartime inflation control. The state's development of a robust tax system that provides high and automatically increasing revenues over time, along with monetary mechanisms for price stability, obviate the need for war taxes. In particular, the development of the income tax system and the use of inflation-targeting monetary policy expanded the state's warfighting capacity without reliance on war taxes. These developments suggest a change in the relative capacity of the state and the executive vis-à-vis the public. The executive can leverage the state's significant institutional capacities for war with a much-reduced requirement for additional political action or public mobilization, minimizing the potential for increased public scrutiny that such efforts invite. Consequently, war taxes have obsolesced, and aren't expected to return.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

In October of 2003, Senators Kerry and Biden lobbied on the senate floor for an amendment to the $87 billion Iraq war supplemental funding bill:

> What is the Senate going to do? Stand here and defend the proposition that America in its current fiscal condition can support a tax cut for the wealthiest Americans at the expense of common sense and fairness? That is what this vote is about. That is what this choice is about.
>
> The President has talked a lot about sacrifice in recent weeks. In an address from the White House, he said of Iraq, "This will take time and require sacrifice." In his weekly radio talk, he warned that "This campaign requires sacrifice." Even in his State of the Union Address, the President issued a call for sacrifice saying: "We will not deny, we will not ignore, we will not pass along our problems to other Congresses, other presidents, and other generations." But that is exactly what we are doing if we leave this $87 billion in its current form.
>
> Also, there can be no doubt that the President has demanded that most of this sacrifice will come from the men and women in uniform. More than 300 troops have now already given their lives in Iraq. The Army is stretched too thin for its duties in Iraq. And troops who were promised that they would be home long ago remain in Iraq.
>
> On top of that, we have passed a huge tax cut during wartime for the first time in American history. And that is the height of irresponsible, reckless budgeting.
>
> The Biden-Kerry amendment will ask those who can afford to pay this burden to do so, and make their contribution, make their sacrifice to the effort to win the peace.[1]

[1] Senator John Kerry, floor of the Senate, co- sponsor of amendment number 1796 to the Emergency Supplemental Appropriations for Iraq and Afghanistan Security and Reconstruction Bill, 149 Cong Rec S 12311, October 2, 2003.

Not unlike their historical predecessors, Senators Biden and Kerry plead their case to raise a "war tax"—a tax generated for the explicit purpose of subsidizing a war effort—for prosecuting the Iraqi war. Yet, very much unlike the pattern that had been established in virtually every significant war in American history, the Senate failed to raise a war tax that would aid in subsidizing the war effort in the post-9/11 context.[2] Why? At the time of the bill, the post-9/11 war effort was, unlike the present time, popular and relatively successful—between 60 and 70 percent of the American public supported the invasion to disarm Iraq in the fall of 2003 (DiMaggio 2015). The American public had demonstrated tolerance for increased taxation and defense spending in popular opinion polls (Gallup 2001; Pew 2001). More importantly, perhaps, political leaders could rely on the well-established bipartisan precedent of taxation for the purposes of war in America's past. The Biden-Kerry amendment, however, was defeated on the floor of the Senate, and with no pleas for reconsideration by the President.[3]

For only the third time in America's history of warfare, the United States pressed forward with the prosecution of a war effort without leveraging war taxes (see Figure 1.1., below). Historically, war-related taxation had performed two functions critical to the prosecution of a war effort: war taxes generated much needed revenues to fund the war effort, and they stemmed the inflationary pressures that resulted from increased

[2] Here I define a "significant" was as a war lasting longer than six months, following Capella Zielinski (2014). I explain the rationale for this selection methodology in Chapter 2. In short, long wars have more substantial funding requirements that can necessarily be paid for out of existing coffers.

[3] The Biden-Kerry Amendment was tabled and defeated in roll-call vote number 373; 57 yeas (to table, and therefore defeat the amendment) to 42 nays. All but seven Democrats voted against the motion to table, and all but one Republican voted in favor of tabling the motion (Congressional Record 2003). The Senate in the 108th Congress was near split: 48 Democrats with one Independent caucusing with the Democrats, and 51 Republicans. Tabling motions require majority vote of the Senators present and voting to be passed (Davis 2015).

government expenditures. Furthermore, war taxes had been the primary means of increasing the state's capacity while the public was "rallying" around the flag, and willing to tolerate increased extraction by the state in the name of national purpose.

How might one explain this empirical irregularity of funding the American wars in Iraq and Afghanistan without war taxes? I explain this puzzle as a function of the institutional development of the tax and price stability mechanisms after World War II, and the capacity they together afford the state and its executive for war—without additional taxation. Prior to the development of these capacities, war taxes served an important role in raising funds for war expenditures and countering inflation. Today, however, war taxes aren't used for these purposes because taxes in general aren't used for contemporaneous spending or inflation control. Changes in the purpose of taxation stem from the development of the tax and price stability mechanisms in the post-World War II period. Relative to the pre-World War II period, the post-war tax system generated high levels of revenues structured to automatically increase over time,[4] offering the executive substantial revenues for funding wars absent new taxation. Complementary developments in monetary policy from the 1960s through the 1980s further reduced any residual need for war taxes to stem upward moving prices. By 1990, improvements in the central bank's capacity for price stability had obviated a need for war taxes as a tool for countering wartime inflation. Consequently, the significant wars of the post-1990 period have broken from the historical pattern of war taxes levied during war in the United States, and freed the executive from the increased public scrutiny that more taxation begs.

[4] Automatic growth in tax revenues over time is contingent on non-zero real economic growth. Increasing tax revenues over time indicates the generation of revenues in excess of real economic growth.

My explanation views changes in the use of war taxes in terms of institutional resilience—or the state's capacity for political action[5]—and preliminarily explores its implications in terms of the potential autonomy from public mobilization this capacity affords the executive. In other words, these institutional capacities allow the executive to prosecute wars without raising new taxes—war taxes—and therefore avoid drawing increased public scrutiny of his foreign policies. Ultimately, this autonomy allows a higher potential for U.S. wars to be prosecuted without the former need for a high level of public mobilization behind a war effort.

In the remainder of this chapter, I set out to both explain this puzzle in greater detail and contextualize the puzzle within the literatures of political economy and security studies. I present the argument in brief, and preview the implications of the argument in terms of their significance for the state. Finally, I lay out the plan of the dissertation.

The Empirical Puzzle

The 108th Congress' failure to raise a war tax was surprising for a few reasons. First, why was the bill proposed so long after the initiation of hostilities following the 9/11 attacks? Although the attacks had not been anticipated, the immediate demonstration of political and military resolve by the United States—not to mention the President's direct claims of the United States as "at war"—signaled the need for increased revenues with which to prosecute a global war on terror. Yet, no such political

[5] Capacity is here defined according to common usage: the ability or potential to do something in particular. In the literature, institutional capacity has been defined in terms of the state's ability to extract resources from society (Organski and Kugler 1980), in terms of the development of adaptable, coherent, complex and autonomous political institutions (Huntington 1968), and in terms of the effectiveness of political institutions (Jackman 1993). All of these definitional forms are understood to be relevant to my formulation of the term capacity, as each specific type or measure of capacity is understood to contribute to the state's overall capacity for war (amongst other political pursuits).

mobilization for wartime revenues followed, even as the war unfolded and grew more costly.[6] The absence of such political mobilization represents a deviation from the historical trend in America's wartime fiscal strategies. These war finance strategies of the past usually sought revenue generation immediately after hostilities commenced, if not earlier, in anticipation of impending hostilities.[7] Past American presidents sought to provide the state with adequate resources through changes to the tax structure in the form of war taxes, in addition to debt and money creation.

Second, even if it didn't come about until late in 2003, well after the commencement of hostilities, why wasn't the war tax ultimately raised? There are two important aspects to this empirical puzzle, both of which featured regularly in the political calculus of prior wars. Given the historically regular use of war taxes to fund America's wars (see Table 1.1, below), the defeat of the Biden-Kerry amendment reflected a discontinuity with the wartime bipartisan consensus that had figured into the passage of most wartime bills. Prevailing explanations for the (extremely limited) variation in the use of war taxes suggest that partisan preferences on taxation have been relatively fixed over time (Flores-Macias and Kreps 2013). Undoubtedly, party preferences factor into the explanation for tax policies more generally, but wartime periods have been noted for their bipartisan displays of patriotism and rallying (Witte

[6] In 2010, the most recent comprehensive government estimate available, the post-9/11 wars were assessed to cost $1.147 billion in constant fiscal year 2011 dollars. The post-9/11 wars cost is just over one-quarter of the $4.104 billion (constant fiscal year 2011 dollars) cost of World War II, and just under double the cost of the Vietnam War (Daggett 2010).

[7] World War II-related taxation, for example, began June 25, 1940 with the Revenue Act of 1940, prior to the attack on Pearl Harbor and the official entry of the U.S. into the war. The U.S. maintained neutrality from 1937 until December 1941, even though it supported Allies with Lend-Lease beginning in March 1941.

1985). The failure of the Biden-Kerry war tax amendment therefore reflects a deviation from America's wartime bipartisan past.

The failure to ultimately raise a war tax is also surprising given the historical use of war taxes to stem wartime inflation. Inflation figured regularly in the wartime economies of the past, and was a key economic consideration for all of America's 20th century wars prior to the 1990s. Historically, price inflation often stemmed from increased governmental expenditures in the domestic economy; as the government infused the economy with more capital to pay for wartime goods and services, prices and wages rose (unless regulated), while expectations of future price increases rose as well, triggering an inflationary cycle (Goldin 1980). Taxation was a means of constraining the spending power of the public, which, unchecked, would drive up prices and wages.

Conflict	Dates	War Tax Years	War Tax Type
Revolutionary War	1775-1783	1789	Exciese taxes on alcohol, coffee and tea.
		1790	Increased duties on alcohol, coffee and tea.
Northwest Indian Wars	1785-1795	None	None.
Franco-American War	1798-1800	1798	Taxes on property and slaves.
War of 1812	1812-1815	1813	Excise taxes on carriages, sugar, alcohol.
War of Texas Independence	1835-1836	None	None
Mexican-American War	1846-1848	Uknown	Tax increases, unknown type.
Civil War	1861-1865	1861	Income taxes.
		1862	Income taxes.
		1864	Income and stamp taxes.
World War I	1917-1918	1914	Alcohol and stamp taxes.
		1916	Income taxes.
		1917	Income and estate taxes; high profits corporate tax; excise taxes.
		1919	Income taxes.
World War II	1941-1945	1940	Income and corporate taxes; excess profits corporate tax.
		1941	Income and corporate taxes; excess profits corporate tax; excise taxes.
		1942	Income tax;excess profits corporate tax; excise taxes on alcohol, luxury goods, telephones.
		1944	Income taxes.
Korea	1950-1953	1950	Corporate income taxes.
		1951	Income taxes; corporate taxes; excise taxes on alcohold, gasoline, automobiles.
Vietnam War	1964-1973	1966	Excise taxes on telephones, automobiles.
		1968	Income tax surcharge; corporate tax surcharge.
Persian Gulf War	1990-1991	None	None
Afghanistan	2001-2015	None	None
Iraq	2003-2011	None	None

Table 1.1. War Taxation for Major U.S. Wars by Conflict and Type, 1775-2015.
Notes: Major Wars are considered wars longer than six months in length that reached a battle death threshold of 1,000 or more, following Capella et al 2014 and Flores-Macias and Kreps 2013.
Source: COW Interstate Wars v4.0 data are used from 1817-2010; Flores-Macias and Kreps wars data from 1775-1817 and tax data from 1789-2010; Tax Policy Center data from 2010-2015; Capella Zielinski 2014 and Goldin 1980 data for the Mexican-American War.

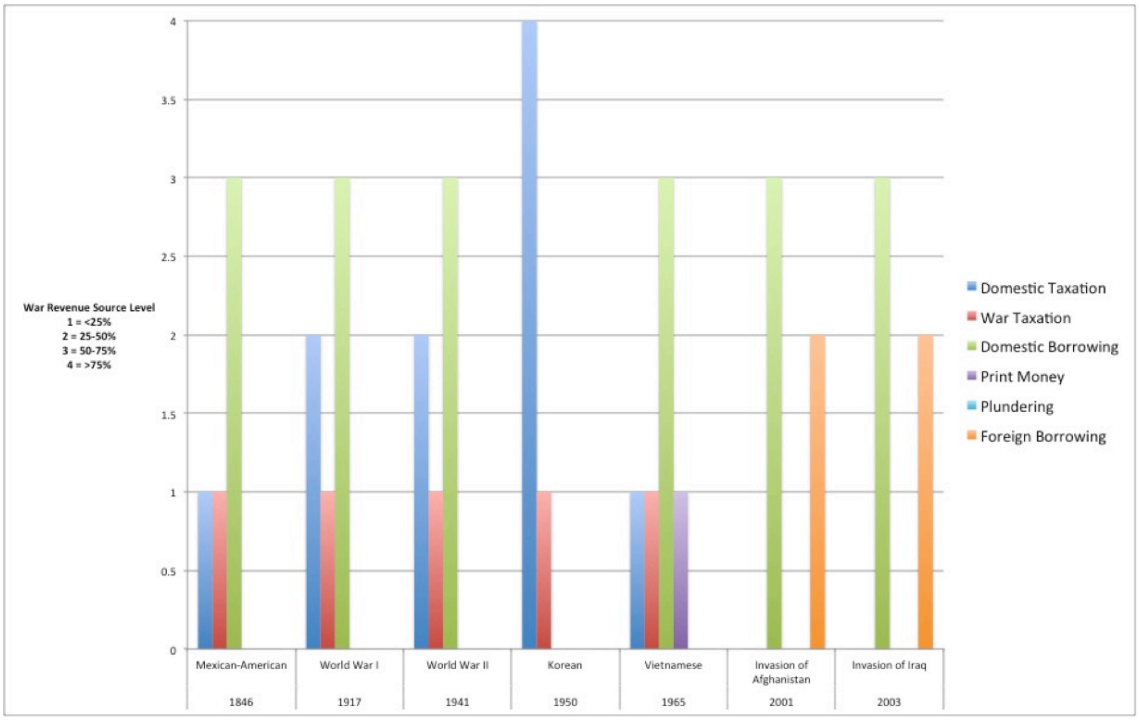

Figure 1.1. United States Interstate Wars (> 180 days), 1823-2003, by War Finance Source.
Source: Capella et al. 2014 CCWP Data Set.

Third, why wasn't the opportunity for additional revenue generation exploited by the political leadership during a crisis period, when popular support for taxation would be expected to be higher than usual? Popular opinion polls indicate that the American electorate has been more tolerant of wartime tax increases and increases to defense spending during such national emergencies (NBC/WSJ Poll 2003), but that these moments of support are somewhat fleeting.[8] Historically, wars have provided opportunities for institutional reform that resulted in increased state capacity in the post-

[8] The September 2003 NBC/Wall Street Journal Polls indicated that 56 percent of the respondents supported repealing the 2001-2003 tax cuts for the "upper income brackets" to pay for the supplemental request for $87 billion in spending on the Iraq and Afghanistan conflicts (Bank et al 2008, 160). My coding of 150 public opinion polls from 1939-2015 shows only very fleeting majority support for increased defense spending, but that this support occurs only in close proximity to the commencement of hostilities. See Appendix Table 2 for the coded data.

war peace (Rasler and Thompson 1989). World War II is the quintessential example of this type of institutional development process and the resultant increase in state capacity.

Finally, the move away from war taxes as a regular component of America's wartime finance strategy becomes even more puzzling when one considers the consistency of their use against the dramatic variation in characteristics of the conflicts. While the revenue demands of the World Wars were extreme and reasonably necessitated war taxes, the short and inexpensive Spanish-American War of 1898 didn't produce the same overwhelming resource needs. Nevertheless, the U.S. government imposed excise taxes—or "sin" taxes—on luxury goods like alcohol, tobacco, and chewing gum. Congressional records dating from the period reflected concern about the potential impact of borrowing for the war on perceptions of U.S. creditworthiness (House of Representatives 1902).

At present, I limit my explanation to the United States, although it may apply to liberal democratic states more broadly. I'll explain why I believe this may be a more widespread phenomenon in the Conclusion, which preliminarily explores this empirical puzzle in a cross-national context.

The Argument in Brief: Institutional Resiliency

In my estimation, the resiliency of American institutions obviated the need for war taxes in the post-9/11 context. By "institutional resiliency," I mean a robust institutional capacity for political action—in this case, for the prosecution of war without mechanisms for additional revenue generation or inflation control. Institutional capacity—the ability or potential to do something in particular[9]—can come in various

[9] See footnote 5 for additional notes on the definition of capacity.

forms; financial resources that enable any number of policy actions to be achieved, physical or military manpower and materiel that offer leaders foreign policy options, or the institutional provision of information, agenda-setting, or procedural rules that enable the pursuit of specific policies. For the purposes of this analysis, "institutions" are the rules of the game that structure human interaction, and include both formal and informal guides to human behavior (North 1990).

Institutional resiliency provides the state a greater baseline capacity for political action, alleviating the historical requirement to generate revenues for war spending or defend against wartime inflation through war taxes. More specifically, my argument suggests that path-dependent structural changes have resulted in an institutional resiliency in the United States that obviates any need for additional taxation for war. By this I mean that robust institutional capacities provide the executive with the resources needed to pursue her foreign policies as a routine matter with few, if any, marginal political costs. With already high and stable levels of tax revenues that grow over time, political leaders possess few incentives to pursue potentially electorally costly policies that invite greater scrutiny of their foreign policy initiatives, or sanctioning at the ballot box. Given high peacetime revenues and a price-stable environment, the executive no longer needs to secure additional revenues for war, or control for inflation. The stable revenue and inflation context offers the potential for the pursuit of political objectives, such as war, without further, potentially costly political action.

These revenue and price stability mechanisms were wrought during historical crisis periods that initiated the development of enduring institutional capacity for the state. Much like North's (1990) seminal account of institutional change, I seek to explain

the end of war taxes as a common feature of historical war finance strategies in the United States using an institutional change explanation. Both the crisis periods of the World Wars and, later, the disruptive stagflation of the 1960s and 1970s triggered the choice of a specific institutional development path. Over time, these institutional capacities were gradually and incrementally adapted to the state's dynamic needs.

Importantly, institutions offer the context within which individual actors make decisions, and define the set of incentives and constraints that inform decision-making at the individual level. These institutions' changed resiliency over time creates the potential for political leaders to pursue their policies using established institutional capacities, rather than lobbying for more. Resilient institutions can promise stability in the wake of changes that make political mobilization more difficult or less necessary. They also, however, offer opportunities for the detachment of public mobilization from the prosecution of war efforts.

In particular, two major institutional changes in the domestic political economy have altered the decision-making context for the executive in the United States. First, the transition from a low-level, narrowly based tax regime to a more extractive, widespread tax system enabled a dramatic and sustained increase in the state's revenue stream. Reliance on a tariff-based revenue system throughout the majority of the 18th, 19th, and early 20th centuries meant that the state's revenue stream was contingent on the flow of goods potentially disrupted during wartime, severing the state's lifeline to resources. The wartime transition to an income tax-based revenue system, briefly implement during the Civil War and again in World War I, finally took root as the state's main avenue for extraction during World War II.

This wartime development of what I term a "robust" revenue system based on income taxation changed the institutional context within which the executive pursues his political agenda.[10] Formerly subject to disruption and reliance on the rich, the post-World War II tax system offered the capacity for generating stable and high revenues, and increasing them over time. The new tax system relied on a much broader base and one less vulnerable to the uncertainties of wartime trade. The consequence of this post-World War II institutional resilience has been to enable the state to divert funds from one policy to another without raising additional targeted taxes, to count on a general pattern of increasing revenues over time, and to mostly avoid the increased scrutiny that additional taxation invites. Given these revenue resources, taxes in general do not need to be raised to "pay as we go" for specific policies.

Second, the evolution of monetary policy management in the United States freed the executive from the constraints imposed by an inflation-ridden economy during wartime. This institutional change followed the stagflation shocks of the 1960s and 1970s, continuing into the 1980s, when the central bank pursued price stability through the use of inflation targeting methods. Inflation targeting is the management of inflation using interest rate adjustment centered on maintaining a numerical inflation rate target or target range, and public communication about those targets.[11] The parallel effort to

[10] In Chapter 2, I'll discuss robustness more extensively, but suffice it to say here that a robust tax system is understood to be one that possesses a high capacity for revenue generation. This can mean either that the tax system generates a high level of revenues, relative to some prior baseline, or that it possesses the potential to increase those revenues (relative to proportional real economic growth) over time without additional tax legislation.

[11] Inflation targeting regimes are typically characterized as having four characteristics: a numerical inflation target, accountability mechanisms, the use of inflation forecasting and making price stability a priority for monetary policy (Mishkin 2004; Heenan et al. 2006). The United States is considered by most to practice

increase the Federal Reserve's transparency in their management of inflation solved the problem of consumers' inflationary fears as a prime driver for inflation. As a result of this institutional development, the central bank effectively neutralized inflation as an executive concern in a wartime economy.

Two introductory notes related to these institutional developments are in order. One, it's important to make clear that my argument implies a change in the purpose and structure of taxation in general, not just war taxes. War taxes are no longer distinct from other forms of taxation given changes in the general purpose of taxation after World War II enabled by these institutional developments. Historically, war taxes were necessary and different because they generated revenues for contemporaneous spending and counteracted inflationary pressures. In the post-war period, however, war taxes aren't necessary or distinct because taxes in general aren't used for contemporaneous spending and inflation is not a concern. Instead, we find that tax increases today make only modest increases in government revenues, and are used primarily for purposes other than contemporaneous spending or inflation control.[12] Consequently, the executive can avoid the unnecessary additional war taxes that may invite increased scrutiny of his foreign policies.

Two, the development of the tax institution alone is an insufficient explanation for the obsolescence of war taxes in the United States. Although the tax institution became robust following World War II, generating a healthy peacetime revenue stream, the

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inflation targeting even if it does not possess the legal mandate to do so at the expense of unemployment (Goodfriend 2003). Inflation targeting will be discussed more extensively in Chapter 4.

[12] This is not to say that contemporaneous spending motives are completely absent from tax legislation today—this is not the case. But as Chapter 3 explains, three-quarters of post-WWII revenue bills have motives identified as other than contemporaneous spending.

inability to control inflation sufficiently (in general, but especially in wartime) led to the raising of additional war taxes during the Korean and Vietnam Wars. Only after the inflation-taming of the 1990s has the United States experienced substantially less inflation volatility, creating a context of price stability within which broader economic decisions—and narrower war finance decisions—are made.

In sum, the development of robust tax and price stability capacities in the post-World War II period have enabled a general shift away from a reliance on additional taxation for contemporaneous spending needs, or as a tool for inflation control. Instead, baseline tax revenues provide the executive with the immediate revenues and price-stable environment needed for the pursuit of her policies, without further political action. The implication is that these capacities provide the state with significant institutional resiliency for war.

Alternative Explanations

War finance and its relative burdens have retained a central position in international political economy and security studies, as a subset of research in the mechanics and politics of war (Tilly 1975; Kennedy 1988). Historically, wars have been financed through a mix of taxation, borrowing, and money creation (Rockoff 2013; Bank et al. 2008; Goldstein 2003). The mix of these means, however, has shifted over time, according to variations in economic policy (Ohanion 1998), macroeconomic theory (Braun & McGrattan 1993), and partisan preferences (Flores-Macias & Kreps 2013), amongst other factors. Undoubtedly, a comprehensive explanation of the obsolescence of war taxation in the United States would admit of many different causal mechanisms in contribution to the singular outcome of the absence of war taxes. My interest here is

narrower, instead seeking to establish that institutional development has played an important role in their obsolescence, and one that has implications for democratic accountability. As such, I'll review the literature most directly relevant to my thesis, some of which may be characterized as offering competing explanations. In reality, it is more likely that these few arguments each identify pressures that have jointly contributed to the obsolescence of the war tax in the United States.

Three primary explanations related to the obsolescence of U.S. war taxes present important considerations as alternatives to institutional development. First, war taxation has been explained in terms of partisan preferences. Flores-Macias and Kreps (2013) make the case that, across all cases of interstate war from the late 1700s to present day, the proclivity to use a war tax is based in partisan preferences about taxation more generally. Democrats are found to be the pro-tax party, and implement war taxes, while Republicans (and the Whigs before them) are found to avoid them.

Although the partisan explanation may explain general tax proclivities, it doesn't seem to satisfy the puzzle at hand. That is, if Democrats tax for war, why didn't the Obama administration raise a war tax? Obama inherited a long and costly war from Republican administration, but rather than raise war taxes, President Obama extends the tax cuts enacted by his Republican predecessors.[13] This tax-cutting behavior appears to be inconsistent with an explanation that relies on general Democratic Party preferences for taxation, especially in light of the extension of major tax cuts. Although Obama's

[13] Obama is not the first to inherit an unpopular war from a prior administration; the Johnson administration inherited the Vietnam War from the Kennedy administration. This inheritance did not deter Johnson from implementing war taxes twice in 1966 and 1968, even though he was very reluctant to do so for fear it would jeopardize his Great Society program.

extension slightly modified the structure of the tax provisions in the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act, the tax bill is nevertheless estimated to generate negative revenues (Tempalski 2006).[14] Obama's tax behavior is consistent with my explanation that the motives behind tax bills and the structure of taxation are different in the post-World War II period, given that his revenue bills are all revenue negative or generate only marginal tax revenues. For example, Obama's tax bills through 2012 are all significantly revenue negative—that is, they are estimated to generate less revenues for the federal government relative to the pre-bill baseline—and the one bill (Affordable Care Act of 2010) generating positive revenues for the government achieves only a .05 percent of GDP effect (ibid).[15]

Taxation has been assigned a critical role in the creation of the modern nation-state and its ability to generate revenues for war (Tilly 1990). But taxation has rarely been enough to cover the often extreme increases in revenue needs (Slantchev 2012; Shea 2014; DiGiuseppe 2014), in addition to being considered politically costly (Campbell 2009). Although war is often framed in terms of a "guns" versus "butter" resource tradeoff, governments sometimes simply expand the resources available to them during times of war to alleviate the tradeoff (Rasler and Thompson 1985). But the classical works in political economy indicate political leaders are relatively constrained in their

[14] Revenue bills are estimated as generating negative revenues at one year after their implementation by Tempalski (2006) if they effectively do not raise more revenues year-on-year than if the bill had not been enacted. Tempalski uses the standard assumptions used by the Joint Committee on Taxation in their revenue estimates.

[15] These figures on the revenue generation effects of post-World War II tax legislation is addresses comprehensively in Chapter 3. Revenue generation figures are presented for the first full year after enactment to enable longitudinal comparison.

ability to increase revenues for war via taxation because taxation makes the war visible and tangible to the taxpayer:

> "The ordinary expence of the greater part of modern governments in time of peace being equal or nearly equal to their ordinary revenue, when war comes they are both unwilling and unable to increase their revenue in proportion to the increase of their expence. They are unwilling, for fear of offending the people, who, by so great and so sudden an increase of taxes, would soon be disgusted with the war; and they are unable, from not well knowing what taxes would be sufficient to produce the revenue wanted" (Smith 1977 [1776], 391).

Smith's quote makes clear the incentives of borrowing for war's expenses, given it's potential for either masking the real cost of war or deferring its immediate pains for the public. The second alternative explanation for the obsolescence of war taxes relates to the use of borrowing as a substitute for taxation. Political leaders might instead take advantage of borrowing to expand the resources for war, and even continued social spending. There are certainly strong trend lines of increasing federal deficit spending since the Carter administration, and rising total debt figures (Masters 2012), offering a potential alternative explanation to the obsolescence of war taxes in the post-9/11 wars. Historically, however, U.S. wars have been heavily funded via borrowing in addition to—not instead of—taxation. For example, U.S. taxation during World War II covered less of the total war expense than any other allied states' taxation, at just 45 percent of war expenditures (Blum 1976, 242). Deficit levels were higher during World War II than they are today, indicating the acceptability of using borrowed funds to subsidize the war effort, yet war taxes were used alongside borrowing. Using World War II as an example of the joint use of borrowing and taxation may be suspect, given the war's enormous revenue needs. However, even in small wars like the Spanish-American War, borrowing

and war taxes were used in tandem (Rockoff 2012). If borrowing might have paid for wars in the past, why bother with taxation?

Borrowing to fund war-related expenses has been a consistent component of America's war finance strategy over time. The post-9/11 wars have been no different. No only was borrowing heavily utilized for the most recent U.S. conflicts, but has featured centrally in nearly every war in America's past. With the exception of the Korean War, borrowing comprised the majority of the revenues directed toward war efforts (Goldin 1980). Cross-national evidence on the suite of war finance strategies used in significant interstate conflicts also reflects this trend; while many states made use of war taxes, they also borrowed heavily to contribute to the revenue surge needed to prosecute their military campaigns (Cappella Zielinski 2014). In just 7 out of 94 cases of major belligerents engaged in wars from 1823-2003 did a belligerent fail to borrow funds for war (ibid).[16]

As one of three primary methods for subsidizing war activities, access to credit has been considered amongst the most critical means, given its relatively more instantaneous provision of monetary resources to governments (Obstfeld & Rogoff 1997). This feature of credit has permitted governments to respond with immediacy and sufficiency to pressing security demands (Horn 1959). Credit also permits governments to keep the tangible costs of war low, increasing domestic political leverage by reducing dependence on constituents (Levi 1988). The advantages of borrowing to fund war efforts have long been recognized by political economists:

[16] Wars are defined at lasting longer than six months and incurring battle deaths greater than one thousand in this study (Capella et al 2014).

> "The facility of borrowing delivers them from the embarrassment which this fear [of offending the people] and inability [to sufficiently determine tax levels] would otherwise occasion. By means of borrowing they are enabled, with a very moderate increase of taxes, to raise, from year to year, money sufficient for carrying on the war, and by the practice of perpetual funding they are enabled, with the smallest possible increase of taxes, to raise annually the largest possible sum of money" (Adam Smith 1977 [1776], 391).

Debt finance for war acts as a complement to, rather than an explanation for, the non-use of war taxes to fund war-related costs. Borrowing strategies have been used alongside war taxes for nearly all of America's wars, making it unlikely that borrowing itself can explain the observed variation in the use of war taxes. The logic behind why borrowing is an appealing war finance strategy, however, extends to my claim of institutional resilience. Borrowing features so regularly in war finance strategies not only because of its capacity for minimizing economic disruptions and smoothing the tax requirements of war (Barrow 1979), but also because it provides for increased political insulation from public scrutiny. Democratic governments are more insulated from the whims of popular support when credit keeps wars more distant from constituents' pocketbooks (Shea 2013). But democratic governments are *also* more insulated from the whims of popular support when they can harness the extant capacity of the state's institutions for their political purposes. New taxation indeed serves to highlight the executive's political pursuits and invites scrutiny of his expenditures, rather than create a popular support buffer of sorts between the public and the state. This study argues that the changed capacity of the domestic institutions also keeps war's costs much less proximate to the public.

Nevertheless, borrowing strategies for war should be affected by institutional developments like the ones described herein, insofar as they shape how much is borrowed and for what ends. Much progress has been made in understanding the conditions for borrowing for war, but most research has examined these various strategies for war finance in isolation from one another (cf. Carter, Ondercin and Palmer 2015). Poor creditworthiness, for example, is found to constrain the provision of security (DiGiuseppe 2015), but is not evaluated in relationship to taxation or money creation. Research that has opted for a more comprehensive approach to war finance suggests that these war revenue strategies typically include all means available and may vary over the course of a war (Carter et al., 2015) or according to its duration (Cappella Zielinski 2013). Interestingly, the most comprehensive research effort fails to explain why war taxes dropped out of the U.S. war finance strategy after Vietnam, other than to claim that the efficiency of taxation decreased relative to complementary methods of war finance (Carter et al 2015). While my research effort does not address all of these deficits, it further develops our understanding of the relevant dynamics of war finance by including a domestic institutional perspective that has been mostly neglected in the literature. Furthermore, my research effort sets up a future research agenda that looks to similar cross-national institutional developments that might explain why war taxes have fallen out of war finance strategies more widely.

Finally, the end of the Cold War coincides with the timing of these new patterns of war taxation. Could the post-Cold War military drawdown explain why the United States has not employed war taxes in its war finance strategies after the Vietnam War? Some may argue that the end of the Cold War signaled the termination of an existential threat to

the United States, and therefore a reduced need for war taxes after 1990. This is an unlikely explanation for several reasons. First, rather than confront a post-Cold War demobilization, the U.S. instead found itself almost immediately mobilizing for a major military confrontation in the Middle East—the Persian Gulf War. Although the war was won quickly and decisively, the war began an expensive, decade-long effort to coerce the Iraqi regime into compliance with international norms. These developments hardly represented the post-Cold war peace dividend that many imagined, and ultimately, in 2003, embroiled the United States in one of its longest and costliest wars yet.

Second, the onset of a persistent, widespread war in the Middle East in the post-9/11 context reflects a security climate for the United States different from, but equally consequential to, the Soviet Cold War threat. While the Obama administration has downplayed the threat from transnational terrorism and Middle East instability as insufficiently threatening to the United States to qualify as existential (White House 2016), the domestic institutional changes that have taken place since the 9/11 attacks belie these claims. The civil liberties that form the cornerstone of the liberal democratic state have been under assault in the post-9/11 period, prompted by the belief that the extension of domestic surveillance will improve threat detection—and that this tradeoff is politically viable and constitutionally justifiable. The Patriot Act and similar extensions of the state's reach—as in the domestic wiretapping, extrajudicial detentions, extraordinary renditions, and judicially questionable interrogation techniques—have challenged the government's "business as usual" rhetoric. Rather, the "new paradigm of prevention" elevated terror attack prevention above ex post due process and criminal punishment has encouraged extreme challenges to First Amendment rights that some

argue are reminiscent of the Cold War era (Council on Foreign Relations 2003; Stone 2005).[17]

Third, the U.S. response to the complex security landscape of the post-9/11 period has potentially threatened its more enduring foreign policy goals and undermined its credibility as an international actor. The U.S. use of remotely piloted vehicles, or "drones," to conduct extrajudicial and extraterritorial strikes in sovereign states around the globe has been argued to have challenged international legal and human rights norms (Vogel 2011; Knoops 2012; Byman 2013), undermined the legitimacy of the foreign governments the United States seeks to support (Boyle 2013; Fair et al 2014), and generated a constant stream of new militants that exacerbate the future security environment for the United States (.e.g Cronin 2012). The lack of transparency in the legal and policy rubric used to make decisions about targeted killing potentially further threatens U.S. legitimacy and freedom of action, both at home and abroad (Zenko 2013), defying claims of a benign post-Cold War security context.

Finally, the United States faces an uncertain multipolar order that confounds ready identification of where military capabilities should be focused, generating an expensive hedging strategy. This lack of a clear adversarial order makes for schizophrenic foreign policy and expensive military development strategies that must contend with rising near-peer threats and contemporaneous low-tech, asymmetric ones. A resurgent Russia, an increasingly capacious China, and an unsteady North Korea characterize this emergent multipolar order, each of which signal a need for continued investment in conventional

[17] "New paradigm of prevention" is the term used by U.S. Attorney General John Ashcroft in his remarks to the Council on Foreign Relations in 2003 in regard to the Department of Justice's strategy for fighting and defeating terrorism.

military capabilities and nuclear deterrence.[18] Some make the case that the Cold War never ended (Birnbaum 2016; Frum 2015), with a renewed U.S.-Russia standoff in both Ukraine and Syria, and with Russia's military expenditures (as a percentage of GDP) sitting at higher levels than the United States in some recent years (Frum 2015). Others lament the Cold War's passing as the end of certainty in security and foreign affairs for the United States and its western allies (e.g. Mearshimer 1990).

To characterize the post-Cold War period as one necessitating significantly reduced security demands for the United States—that could potentially account for changed patterns in war taxation—is a most tenuous claim. Rather than enjoy the clarity of the bipolar Cold War order, or the peace dividend its end was purported to offer, the United States finds itself instead confronted with a complex and costly security environment that in some ways mirrors the severity and seriousness of the Cold War era. Fighting a low-intensity conflict on one front while preparing for a high-intensity near-peer future conflict makes significant resource demands on the state. Furthermore, the U.S. strategy for terrorism prevention challenges the foundations of its respect around the world, and the asserted legitimacy of American exceptionalism. These changes make for a less certain American future, and one more heavily dependent on the state's capacity for warfare.

The Plan of the Dissertation

In the subsequent four chapters, I lay out an argument of institutional development and its implications for war taxation. The crux of the argument is that path-dependent institutional outcomes have alleviated a need for war taxes, leading to their

[18] See, for example, William Perry's new book *My Journey at the Nuclear Brink* (2016), in which he writes "Today, the danger of some sort of nuclear catastrophe is great than it was during the Cold War."

obsolescence in the United States. Institutional capacity has obviated a need for war taxes as a means of raising revenues for war and stymying inflationary pressures. The executive can instead rely on the status-quo tax revenues of the tax system and the price stability of effective monetary policy to prosecute war absent war taxes. In seeking to explain variation in the dependent variable of war taxes, I look to two specific institutional developments for cause. The first of these is the development of a robust and automatically increasing revenue system. The second is the evolution of monetary policy that effectively stabilizes price levels and public expectations about those levels. Combined, these two developments increase the capacity of the state for prosecuting war without the additional political action formerly necessitated by war's economic demands and effects. By this, I mean that the executive does not need to petition for increased taxes for war spending or to counter inflationary pressures. Rather, she can rely on status quo capacities to resource the state for war. The implication is that, given these capacities, the executive faces a reduced need for public mobilization behind her war policies. Furthermore, she avoids the potential political risk and increased scrutiny that war taxes invite. There is a new pattern of war without taxation and inflation after the 1990s, and its corollary is the state's institutional resiliency for war.

Chapter Two lays out the theoretical basis for my explanation about the obsolescence of war taxes in the United States since the 1990s. I employ a soft rationalism ontology[19] that allows for changing individual utility functions in different institutional contexts. I outline the discrete hypotheses my research tests, as well as my

[19] By "soft" rationalism, I mean that actors are considered to be instrumentally rational in their decision-making, with preferences over potential outcomes according to their institutional context. Since institutions are the patterns of interaction that incentivize and constrain human behavior (North 1990), institutions are assumed to inform how preferences are ordered.

overall methodology and research approach. Rather than rely on case studies to explain the effects of institutional change over time, I set out two analytical objectives that allow me to integrate both qualitative and quantitative evidence to substantiate my hypotheses.

In Chapter Three, I set out to demonstrate that development of the tax system in the United States leads to a baseline revenue stream that alleviates the need for political leaders to recurrently seek new revenues for war. I detail the evolution of the tax system itself, generated during the crisis periods of World Wars I and II, and its subsequent refinement. Drawing on an economic measure of tax health called "buoyancy," I demonstrate that the U.S. tax system is designed to generate increasing revenues over time. Next, I use quantitative evidence to reinforce the idea that the structure of the tax system is correlated with the obsolescence of war taxes. Finally, I lay out the evidence that taxation in general has changed in purpose and effect since the end of World War II, as a function of these institutional developments.

Chapter Four seeks to relay a parallel story of institutional development with respect to monetary policy. Following the stagflation shocks of the 1960s and 1970s, the evolution of monetary policy through the 1980s reflected an increasing capacity to contend with the forces of inflation during both war and peace. Using a structured-focused comparison, I outline how the monetary institution has evolved and created greater space for independent political action. I then reinforce this evidence using means testing and regression analysis that suggests a strong correlation between war taxes and inflation.

Lastly, I conclude the dissertation by exploring the implications of the aforementioned findings. The key insight is that the state's institutional capacity for war

in the post-Vietnam War era reduces the need for public mobilization behind a war effort. Public mobilization used to be a necessary condition for such action, but is increasingly detached from the state's institutional capacity for war. Then I set out a research agenda for the future, with the full acknowledgement that the explanation I offer within is only partial.

CHAPTER TWO: AN INSTITUTIONAL DEVELOPMENT EXPLANATION

This chapter outlines the theoretical approach taken to explain the obsolescence of war taxes in the United States since the end of the Vietnam War. The study of state finance has been central to our understanding of the emergence of the modern state, characterizing state capacity, and gaining insights into social values. Although fiscal policy has been known to include all of the government's financial policy, including monetary policy and debt management (Stein 1996), my research focuses on a single dimension of fiscal policy, war-related taxation. I rely on a path-dependent institutional development explanation for major changes to the structure[20] and purpose of taxation in the United States over the last century, including war taxes. The approach suggests two major factors have contributed to the end of war taxes in the United States in contemporary conflicts: the development of a robust peacetime tax system and price-stabilizing monetary policy. A robust peacetime tax system provides high levels of automatically increasing revenues without new tax legislation, alleviating the economic necessity to generate additional revenues for war expenditures.[21] This revenue capacity is so great that it has changed the purpose of new tax legislation altogether, from generating

[20] In this inquiry, I'll adopt the essence of Cerny's (1995) definition of structures. Cerny's (1995, 596) root characterization of structures as "embedded sets," or "patterns," is consistent with my intent of examining how structures act to enable the executive's institutional capacity for political action.

[21] A robust tax system is understood to be one that possesses a high capacity for revenue generation. This can mean either that the tax system generates a high average level of revenues, relative to some prior baseline, or that it possesses the potential to increase those revenues over time without additional tax legislation.

meaningful revenues for contemporaneous spending to merely restructuring the burdens of taxation. A complementary development in the capacity for monetary policy to control inflation has further reduced any residual need for war taxes to combat rising prices. Ultimately, these institutional capacities offer the executive a considerable amount of autonomy to pursue war policies that do not require further political action or public mobilization to support, and therefore avoid the invitation for increased public scrutiny of the executive's foreign policy.

This chapter will proceed in four main parts. In the first section, I outline an institutional explanation for changes in war taxation. The theory's primary insight is that the state's institutional capacity has alleviated an earlier necessity for war taxes to either provide revenue for contemporaneous spending needs or for price stability. In the next section, I frame the inquiry into war taxes theoretically, and substantiate why war taxes are potentially politically costly for leaders. Then, I outline the path dependent nature of tax structures, and discuss how these structures obviate the need to take on political risk in the form of increased revenue extraction for war. In the third section, I discuss the design and operationalization of my research, and outline the hypotheses of this study. Finally, I use the last section to conclude the chapter.

Theory Overview: Institutional Development

The theory laid out within is straightforward: The executive can rely on status quo-tax revenues and price-stabilizing monetary policy to prosecute wars without raising war taxes. The executive understands that high levels of automatically increasing status-quo tax revenues, coupled with continued access to debt, provide the capacity to avoid

"paying as he goes" with new taxes. Without fears of inflation to incentivize and legitimate their use, war taxes merely invite increased public scrutiny of the executive's foreign policy. As such, incumbents will use war finance strategies that avoid war taxes.

Beyond the basic assumptions of a soft instrumental rationalism[22] that undergird this study, there are two main conceptual components to my explanation. The first claim is that political leaders no longer impose war taxes because they can exploit the peacetime revenue system without further political action. When the revenue system is "robust," it provides high baseline revenues and increasing revenues over time, without discretionary changes to the tax code. The contemporary tax institution is the outcome of a path-dependent process of large wartime and incremental peacetime changes to the structures of the tax system, which have given rise to high baseline revenues and the potential for automatic revenue increases over time. The absence of a robust institutional revenue capacity in the pre-World War II context created real revenue needs for contemporaneous spending that could be achieved through war taxes. Post-World War II, however, the evidence points to less interest in generating revenues for contemporaneous spending and therefore less need for additional taxation. This structural "robustness," as I call it, enables the executive to pursue wars without subjecting his policies to the potential for increased foreign policy scrutiny.

More generally, this post-World War II revenue capacity has also alleviated the need for meaningful changes to tax revenues in general, which also invite the potential

[22] I use the term "soft rationalism" here to mean that an actor's decision-making style is understood to be rational, with preferences over the possible outcomes ranked according to the institutional context in which they operate. Institutions constitute the patterns of interactions that incentivize and constrain actor behavior (North 1990), and therefore inform how preferences are ordered.

for political sanctioning at the ballot box. Changes in the structure and purpose of general taxation are the path-dependent outcome of the development of the tax institution itself, and the capacities it has generated for baseline revenues. War taxes are not used today because the very purpose of taxation in general has shifted away from revenue generation for contemporaneous spending to other aims, like long-term economic growth or the distribution of political benefits. Rather, the executive can pursue policies that rely heavily on status-quo revenues while making adjustments at the margins to cultivate political support from those who will benefit from different tax structures.

The second claim is that monetary policy has been so successful in achieving price stability that it has effectively neutralized inflation as a wartime concern. Triggered by the stagflation shocks of the 1960s and 1970s, the incremental development of the central bank's understanding of inflation and capacity for inflation control over several decades led to a price-stable context for war and peace. Both the Federal Reserve's pseudo inflation-targeting method and transparency efforts aimed at controlling the public's inflation expectations played key roles in developing the central bank's capacity for price stability over several decades. These institutional developments freed the executive from the constraints imposed by an inflation-ridden economy during wartime, alleviating a need to impose war taxes as a counter-inflationary device.

Together, these developments provide the state with significant status-quo institutional capacities for the executive's use, without requiring further political action. In other words, rather than generate new tax revenues to pay for war "as he goes," the executive uses status-quo tax revenues, in combination with debt, to fund his policies.

And even if those policies necessitate high spending levels, the price-stable environment affords the executive insulation from rising prices. Ultimately, these capacities enable the executive to avoid the war taxes that might inspire greater scrutiny of his foreign policies, and reduce his need to mobilize public support for war. In this manner, the state's institutional resiliency becomes a potential liability for democratic legitimacy.

As outlined in Chapter 1, my argument does not imply that debt plays no role today in war finance strategies—it does. But the use of debt is unlikely to explain the variation in the use of war taxes because debt has figured regularly into America's war finance strategies. In many cases, borrowing funds covered three-quarters of a war's cost, and taxes just one-quarter (Cappella Zielinski 2014). Given that interest rates on debt are actually higher, on average, after the end of Bretton Woods monetary regime (Bordo and Eichengreen 1993), it is unlikely that debt can fully explain why war taxes have dropped out of war finance strategies in the United States, even if overall debt and deficit levels are relatively high today (Congressional Budget Office 2016). World War II also saw extremely high debt and deficit levels, but still made use of war taxes. The use of debt strategies can be considered a complement to high levels of peacetime taxation that allows the government to "smooth" taxation over time (Barrow 1979), but not to replace it. So while debt has a role to play in funding wars, it is not likely responsible for the obsolescence of war taxes in the United States.

Theoretical Foundations

Taxation has been a vibrant area of study in the social sciences to the degree that some have even claimed academic space for a nascent political economy of taxation

subfield (Liberman 2002). Since Schumpeter introduced the notion of fiscal sociology into the social sciences in his *The Crisis of the Tax State* (1918), researchers have pursued a better understanding of the links between the tax institution and social, political, and economic life. The attempt undertaken within seeks to heed Schumpeter's (1918, 101) exhortation about fiscal sociology, that "he who knows how to listen to its message here discerns the thunder of world history more clearly than anywhere else."

Institutional Development

Institutional development has figured centrally in theories of state formation, development, and capacity, so it is at home as an explanation for new patterns in the use of war taxation. The concept of the Weberian rational bureaucratic state with its monopoly on the legitimate use of violence reflects one type of institutional capacity explanation for the distinct change in modern state forms from earlier, more personalistic forms of rule (Weber [1968]1978). A dramatic expansion of state capacity is considered one of the hallmarks of the modern state (Spruyt 2009), the genesis of which lay not only in institutional development but also in the reciprocal change in state capacities for revenue extraction (Tilly 1975; Webber and Wildavsky 1986; Levi 1988). As Levi (1988, 1) writes, the "history of state revenue production is the history of the evolution of the state." My explanation for the changed pattern of war taxation finds similar support for such a claim.

Not all theories of institutional development fully exploit the explanatory power that state capacities possess for understanding political change, however. Levi's (1981, 1988) predatory rule argument speaks to the potential constraints rulers face in resource

extraction, but does not consider how institutional structures might automatically increase the ruler's capacity for revenue extraction *without* significant bargaining or transaction costs. Revenue generation in the predatory theory of rule necessarily entails strategies to lower these costs and thereby achieve greater relative bargaining power for the ruler, furthering the ultimate objective of garnering greater revenues. The presumption is that gaining a bargaining advantage or reducing transaction costs requires the expenditure of political, if not capital, resources to generate changes in these costs. Levi (1981, 1988) mentions coercive, economic, and political resources—naming citizen support in particular—as the chief means by which the ruler can seek to improve her relative bargaining power, and thereby her capacity for revenue extraction.

What if an improved bargaining position can be achieved, however, without the ruler's additional expenditure of material resources? Levi (1981, 1988) overlooks a key insight of my research: that institutional structures may provide, to varying degrees, the capacity for institutional expansion over time without additional material costs to the ruler. My explanation for the absence of war taxes in the United States today underscores that these state revenue capacities are not only robust, but are also structurally configured to provide for their own growth over time.[23] The executive's continued access to not only large revenue streams, but also to automatically increasing revenues under most circumstances, likely changes the distribution of bargaining power between the ruler and the public in favor of the former. If institutions are so resilient as to provide for their own

[23] Here I refer to the concept of tax "buoyancy," which measures the capacity of a tax to produce relatively more revenue than is proportional to real economic growth. A tax that is considered "buoyant" can therefore generate increasing revenues over time without discretionary changes to tax rates or policy. This will be discussed extensively in Chapter 4.

endurance and expansion, then there is some potential for the marginalization of political action by those institutional capacities, and for a consequent reduction in the need for public mobilization behind a particular policy. To use Levi's (1981, 1988) construct, there are no additional material costs for the improved bargaining position that results from control over increased revenues, given a robust revenue system. The ruler enjoys increased revenues without needing to generate public support for tax hikes, and can move quickly to pursue his foreign policies—in war, or otherwise—avoiding the costs of generating public support. In other words, status-quo state capacities are so great as to reduce the historical requirement to expend significant resources for mobilizing the public behind a particular policy objective, potentially making foreign policy less accountable.

Various dimensions and types of institutional development have been used to explain new, expanded, or improved state capacities in manners similar to the argument developed within. While I exclude the genesis of these institutional changes from my analysis, concentrating instead on characterizing and substantiating *how* these institutions change, others have established what can be considered the key causal forces for institutional change, and they fall into two conceptual camps. One camp points to incremental institutional change as the causal force behind institutional innovation and evolution. Skowronek (1982), for example, explains that the modern American state and its capacities are the product of a struggle for political power and institutional position that is mediated by the organization and structure of the state itself. The generation of new state capacities is a function of the extant institutional configuration—in this case,

those of the courts, parties, and state bureaucracy—interacted with politics, and incremental institutional change over time. Both Skowronek (1982) and Thelen (2003) indicate that it is these "constant causes," rather than critical junctures or exogenous shocks, which contribute in meaningful ways to institutional development.

A second conceptual camp points to critical junctures and exogenous shocks as the key causal forces for institutional change. This camp highlights the path-dependent process that critical junctures have on long-run institutional development, even if prior structural conditions might suggest alternative outcomes (Lipset and Rokkan 1967; Goldstone 1998; Mahoney 2000; Pierson 2004). Institutional development, in other words, is not necessarily constrained to its structural antecedents, but could follow a path highly contingent on specific events.

My explanation for the absence of war taxation in the post-9/11 context draws on both of these theoretical camps, pointing to critical junctures as the triggers for major institutional changes and subsequent incremental institutional developments to explain contemporary state capacities for war. There should be no contention with the claim that the World Wars constituted critical junctures for the United States—and, as I argue, that it was during these periods that the system of revenue generation underwent its most profound and lasting structural changes. The choice of using the income tax as the principle source of state revenue was critical for creating a tax system that would generate increasing revenues over time, especially relative to continued reliance on tariffs vulnerable to fluctuations in trade. Nevertheless, Thelen's (2003) idea that institutional conversion allows for extant institutions to be directed toward new purposes through a

process of incremental change reflects the process by which this income tax system has been adapted to provide robust capacities for policymakers to put to many diverse purposes, even if this system's genesis lay in war funding. Furthermore, while one might reasonably characterize the stagflation of the 1960s and 1970s as the initial impetus behind the central bank's initiative to reform monetary policy in a way that achieved price stability, the actual process of institutional change took place over decades and reflected an experimental approach, rather than a critical choice between alternative policies. The exogenous shocks that set in motion the institutional changes I describe cannot fully explain why these expanded state capacities have had the ultimate effect of changing the pattern of war taxation—for that, the additional explanation of incremental change is also necessary.

Tax Types

Examining the potential explanations for changes in taxation over time requires understanding how taxes are conceptualized. Researchers break taxation down into two major types: direct and indirect. Direct taxes are those taxes collected from individual citizens themselves, like income and property taxes, whereas indirect taxes are typically collected by an intermediary. Domestic consumption taxes and excise taxes are good examples of indirect taxes. Social security and payroll taxes tend not to fit cleanly into either analytical bin, and so are subject to researcher discretion. Some consider them direct taxes because they are typically directly withdrawn from employee wages, but others consider them indirect because employers often remit them to the state. My

argument is primarily concerned with income taxes, and so payroll tax classification is unessential for my argument.

War taxes, in particular, can be classified as either direct or indirect taxes, depending on the type of instrumentation they take. War finance scholars are interested in war taxes as a specific type of taxation, and generally require an explicit link to be made between the tax and the war effort for a tax to be characterized as a war tax (see Flores-Macias & Kreps 2013, 2015; Cappella Zielinski 2014, 2016). Barring this requirement, a war tax can take on various forms of instrumentation; the "sin" taxes of the Spanish-American War, for example, taxed luxury goods via excise taxes (an indirect tax), whereas the revenues for World War I relied on a mix of income taxes and tariffs—a mix of direct and indirect taxes. The identification of a tax as a war tax, therefore, is an analytical assessment of the relationship between a war effort and the revenues generated for that effort, rather than a tax explicitly labeled by legislators as a "war tax."

The nature of taxation is that taxes are fungible; taxes of all types are funneled into the treasury or equivalent national repository, where they are not accounted for in a manner that enables ready differentiation based on revenue source. As a result, scholars have taken to "triangulating" historical evidence on war finance, or using multiple historical references to identify likely revenue bases and purposes, as outlined in Cappella Zielinkski (2014).[24] Consequently, the study of war finance is heavily reliant on secondary sources and histories that retrospectively evaluate overall resources and likely expenditure strategies. This study is no different.

[24] Cappella Zielinski (2014) draws on Lustick (1996) for her triangulation methodology.

In this study, and following the pioneers in war finance research (DiGiuseppe 2015; Flores-Macias and Kreps 2013, 2015; Cappella Zielinski 2014; Carter and Palmer 2014; Shea 2014), war taxes are defined by their explicit connection to a war effort, evidenced in various ways. For example, a presidential appeal to the public justifying new taxes as related to on-going or anticipated major military operations in the context of a war or wars would qualify as war taxes; so would congressional legislation that indicated tax increases intended to support a given conflict. Generally, there is scholarly consensus on what reasonably constitutes a war tax, and coding war tax incidence reflects this consensus.[25] I define the universe of cases to be interstate wars with a duration of six-months or longer in which the United States was a major combatant, according to the Correlates of War 4.0 dataset (Sarkees and Wayman 2010). I follow the precedent and logic followed by Cappella Zielinski (2014), which asserts that long wars are more likely to have different revenue demands than short wars, which the state should not be able to meet with status-quo revenue generation. Interestingly, I find that given the post-World War II institutional capacities of the state, this is actually not the case.

Tax Attitudes and Voting Behavior

Research on fiscal policy, generally, and on war finance or public expenditure strategies, more specifically, make a clear case that taxation introduces the potential for political costs at the voting booth. That borrowing or credit strategies enable sovereigns to hide the cost of public expenditures and reduce the potential for constituent

[25] Note that there is one discrepancy between researchers in the coding of taxes for the Mexican-American War as "war taxes." Flores-Macias and Kreps (2013) indicate there were no war taxes levied, while Cappella Zielinski (2014) finds evidence for war taxes. The coding discrepancy has not been resolved by the scholars to date, according to my correspondence with Rosella Cappella in June 2016.

sanctioning behavior in the face of increased taxation has been well established within political economy texts (Hume 1970 [1752]; Smith 1904 [1776]; Mill 1994 [1848]; Kant 2003 [1795]. These political costs are not necessarily fixed over time or across different contexts, however, and war is one circumstance in which voters may countenance higher taxes in the name of security. My presumption, however, is that, *ceteris paribus*, incumbents generally prefer to avoid raising taxes because they introduce the potential for electoral sanctioning and increased policy scrutiny.

The basis for my assumption about general preferences to avoid raising taxes stems from two literatures: economic voting behavior literature and foreign policy literature. With respect to the former, economic voting behavior literature generally supports the conventional wisdom that taxpayers most often dislike taxation and prefer lower tax rates. Although we still lack consensus on the relative impact of issues, party identification, performance, and values on voting behavior, widespread support has been found for electoral sanctioning based on economic conditions. Economic voting behavior is perhaps the most widely accepted theory within the public choice literature, and suggests that electoral choice is often contingent on perceptions of individual and national level economic conditions (Downs 1957; Kramer 1971; Barro 1973; Monroe 1979; Kinder and Kiewiet 1979; Lewis-Beck and Stegmaier 2000, 2007; amongst others). Downs' (1957) introduction of the instrumentally rational-voter model laid important groundwork for the evolution of what would become a more discrete theory that included economic welfare in the voter utility function (Duch 2008).

Sanctioning models of voter behavior suggest that voters use retrospective judgments of the economy's performance, or their individual financial well-being, under the incumbent to shape their vote (e.g., Kramer 1971; Fair 1978; Fiorina 1981; Hibbs 1982). Voters reward positive economic changes with support for the incumbent at the ballot box, and punish him for poor economic conditions. Tax policy is directly and indirectly related to the executive's capacity to provide for economic health, both at the individual level and the national level. Increased taxes reduce individual discretionary income, reduce the amount of capital available for investment, potentially inhibiting growth, and constrain price and wage growth, affecting individual pocketbooks as well as the national economy. If voters do not sanction incumbents for poor economic performance or growth-inhibiting tax policies, there is fear that they may invite rent-seeking in the future (as in Barro 1973; Ferejohn 1986). The logical consequence for incumbents, then, is that voters will sanction them if they underperform or shirk their responsibilities, creating an incentive to keep the economy, and individual voters, financially healthy.

The empirical literature on economic voting has tested a range of economic indicators for correlations with voter choice, primarily based on evidence from the United States. Presidential popularity is particularly apropos to the study of war taxes in the United States, given the executive's role as foreign policy leader and commander-in-chief—roles that are amplified during wartime. Findings vary somewhat across indicators, but generally research in this vein finds support for the economy as a significant driver of presidential popularity (Mueller 1970; Norpoth 1985; Beck 1991),

even to the degree that changes in these economic indicators precipitate predictable changes in popularity (Duch 2008).[26]

Changes in real disposable income as a measure of economic performance offers a specific and theoretically relevant relationship to election outcomes.[27] Bartells and Zaller (2001), Erikson (1990), Hibbs (2006) all confirmed Tufte's (1978) findings of a strong correlation between annual real disposable income and voting for the president's party. Changes of just one percent in annual real disposable income yields a 2 to 4 percent change in support for the incumbent president's party. More recent work confirms cross-national negative relationship between changes in income tax rates and government vote share (Tillman and Park 2009). A direct relationship between rate hikes and voter sanctioning provides incentives for elected leaders to avoid tax increases. Even if voters are ignorant of changes in tax policy, decisions to raise taxes or implement new taxes will reduce many taxpayers' disposable income, assuming the taxes are either regressive, as in a sales or excise tax, or progressive but broad-based, as in an income or payroll tax. The implication is that new or increased taxes will be costly at the polls for the incumbent, creating a disincentive to use taxation as a means of war finance.

There has been limited testing of the discrete relationship between war finance strategies in general, or war taxes in particular, and electoral sanctioning. Related tests have been done to determine if variable conditions under which a particular war finance

[26] Duch (2009) notes that changes to some set of aggregate economic variables will move presidential popularity between three and ten points.

[27] For a vociferous rejection of these ideas, see Caplan's (2007) book, *The Myth of the Rational Voter,* which asserts that voters are worse than ignorant—they are irrational, and vote irrationally, or according to emotion and ideology, but not according to rational information processing. Irrational voting behavior therefore challenges economic voting behavior and it's findings that the public votes in their own material self-interest.

strategy is implemented impacts public support for war (Flores-Macias and Kreps 2015); if variation in the instrumentation of war taxes will raise, lower, or have no impact on war support (Kriner et al 2015); and if regime type conditions war finance strategies (Carter and Palmer 2015). Geys (2010) finds that pecuniary costs of warfare either directly affect presidential popularity or affects the predicted political cost of war casualties. Geys also finds that these adverse effects of the pecuniary costs of war are strongest under favorable economic conditions (defined as high employment levels). Geys and Vermeir (2008) find support for this relationship in their study of German taxation and German federal government popularity ratings; the government's popularity suffers when tax revenues increase. The implication is that voters may take the monetary costs of war, and the fiscal policies that support these costs, into account when they head to the ballot box, even if the public demonstrates fleeting support for tax increases at war's outset.[28]

Even amidst this evidence on the potential electoral costs of taxation, however, there is unassailable evidence that executives still present initiatives for and gain passage of tax legislation. Why might political leaders pursue tax legislation at all if tax increases only invite political risk? I argue that the purpose and structure of post-World War II tax policies are different, and I present empirical evidence to this effect in Chapter 3. Rather than using new tax legislation to raise revenues for contemporaneous spending needs, the executive uses tax bills for purposes other than revenue generation. Economists have

[28] Public opinion has also been shown to support tax cut rollbacks for the rich in light of increased spending for war (NBC/WSJ Poll 2003). Public opinion polls also show a majority of respondents support increased defense spending in the period immediately surrounding the commencement of interstate hostilities from 1939-2014, while generally they support status quo or decreased defense spending; see Appendix Table 2. This does not necessarily mean, however, that the public supports tax increases to pay for increased defense spending. Indeed, the preference could be for tradeoffs in other spending categories (see General Social Survey 2015), or the public's underestimation of the costs of government. This latter phenomenon is often referred to as the "fiscal illusion" (Puviani 1903; Buchanan and Wagner 1977).

identified four chief reasons for raising taxes: increased spending, countercyclical effects, deficit reduction, and long-run growth (Romer and Romer 2009). A tax changed motivated by increased government spending is characterized as a "spending-driven" tax change, the classic example of which is a war tax. "Countercyclical" taxes are used to normalize output growth, as in the case of an economic recession or inflation (ibid). "Deficit reduction" tax changes seek to reduce an extant budget deficit and, unlike spending-driven taxes, do not co-occur with contemporaneous spending increases (ibid).[29] Finally, long-run tax motivations seek to provide for long-run growth through any number of changes to efficiency, equity, incentives, or small-government ideologies (ibid).

These tax policy motives provide a framework with which to evaluate the nature of tax bills in the post-World War II period. If tax bills are raised primarily for purposes other than spending—one of the two key drivers for war taxes, historically—or if their revenue impacts are modest, the suggestion is that the purpose and structure of taxation in general has changed over time. Rather than raising taxes for contemporaneous spending needs, tax legislation can instead be used to as a tool to curry political favor, either with interest groups or the median voter (Black 1948; Downs 1957).[30] The executive can pursue policies heavily dependent on status-quo tax revenues while making adjustments

[29] Romer and Romer (2009) characterize tax legislation that calls for an immediate spending increase but does not impose taxes for more than a year after the spending increase is characterized as "deficit-reduction" taxation.

[30] Because the median voter has less income than the average voter, he or she is likely to support tax policies that redistribute from rich to poor (Meltzer and Richard 1981).

at the margins to engender political support from those who will benefit from different tax structures, or to facilitate broader economic goals.

Foreign Policy

Recent research examining leaders expectations of the domestic political consequences of their foreign policy performance indicates that executives may have incentives for "going private," or conducting their foreign policy out of the spotlight (Baum 2004). While some studies posit that leaders can enhance their credibility by generating domestic audience costs (Fearon 1994), and potentially improve their chances of success by getting the adversary to back down without a fight (Fearon 1994; Smith 1998; Schultz 2001), others find advantages for leaders that keep their foreign policies more discreet (Baum 2004). Going to war is a risk-laden policy choice, and leaders in democracies who lose wars potentially pay high political costs, like losing elections (Bueno de Mesquita and Siverson 1995; Smith 1996). Backing down from threats made publicly might also signal incompetence to the public and generate domestic political costs for the incumbent (Smith 1998; Guisinger and Smith 2002). If a leader can instead pursue her foreign policies out of the public eye, she may moderate the significant domestic downside risk of unsuccessful foreign policy actions (Baum 2004). The executive may therefore have legitimate cause to avoid political actions that further highlight her foreign policies to the public.

Raising war taxes is one means by which the executive's foreign policies may be amplified in the public spotlight, since taxes raised for war directly link domestic to foreign policy. Leaders already care about the public's opinion of their foreign policies

because they are aware that these evaluations factor into voting decisions (Aldrich et al 2006). Although war taxes may receive fleeting public support, general preferences for taxation in the United States trend in the opposite direction. By the time an election comes around, the "rallying" effect that initially follows the commencement of hostilities may have worn off, especially given perceptions of policy failure (Meernik and Waterman 1996; Mueller 1973) or lack of bipartisan support (Baker and Oneal 2006). Short-term public opinion regarding the executive's foreign policy is often ambivalent early on (Rosenau 1961). Public approval judgments of foreign policy performance fluctuate more than economic performance over time (Mcavoy 2006), and so longer-term and more stable preferences for lower taxation may bear more heavily on voting decisions. Since voters care and know more about domestic policy (Holsti 1997)—reflected in the adage that "voting ends at the water's edge"—they are likely to increase their attention on foreign policies that are linked to the domestic issues that concern them most. Given substantial institutional capacities to pursue foreign policies without additional political action, as I argue, the executive possesses little incentive to draw more attention to his foreign policies by raising a war tax.

The invitation for increased foreign policy scrutiny as a consequence of war taxes is not central to my explanation for their obsolescence in the United States. The end of war taxation is primarily a function of the status-quo institutional capacity the state offers the executive. But the links that war taxes draw to foreign policy further incentivize an instrumentally rational executive to steer clear of them, especially if she has no resourcing needs or inflationary pressures driving their use. As a result, I make the

assumption that, generally, incumbents will consider new or increased taxes related to war as introducing unnecessary political risk. Given the institutional capacity for conducting wars without the need for new revenues or inflation control, the executive will avoid the potential for the increased political costs that war taxes invite.

Institutional Development: Taxation and Monetary Policy

Path Dependence in Taxation

The historical structure of taxation is important to political leaders' cost-benefit analysis when considering new, revised, or increased taxes.[31] As Rose (1984) explains, the great majority of revenue laws are old, since the state is dependent on sustained revenue sources. As a result, the responsibility of the majority of tax laws lay with prior governments. The state must update its tax laws when revenue streams are considered insufficient to accommodate expenditure demands or economic goals, but some national tax structures will provide for increased revenues based purely on GDP growth and inflation (Rose 1985). There is no precise formula to determine how best to provide for automatic revenue increases, given the complexity of national economies and their many influencers, both at home and abroad.

Beyond general economic growth, if the extant structure of taxation includes "buoyant" taxes, then the state has a built-in means of increasing revenues over time without new taxes or tax increases (ibid). Taxes are considered to be buoyant when they are able to generate disproportionately more revenue than accounted for by the rate of

[31] Again, I use Cerny's (1995) definition of structures. Cerny's (1995, 596) root characterization of structures as "embedded sets," or "patterns," is consistent with my intent of examining how structures act to enable the executive's institutional capacity for political action.

economic growth and inflation, or lack thereof.[32] Buoyancy is calculated by dividing the increase in the current-money revenue yield of a given tax by the percent increase in real economic growth (often measured as the current-money value of GDP) during the same period (see Haughton 1998). Buoyancy measures indicate if a tax keeps up with growth in the economy, given numerous sources of deviation from the generation of revenues proportionate to economic growth.

Tax buoyancy is contingent on multiple factors that cannot necessarily be anticipated *ex ante*, given the differential effect of economic growth on different sectors of the economy. Real economic growth that raises labor incomes may contribute more greatly to tax revenues than growth that increases capital gains because the tax base for capital gains may be smaller, making buoyancy measures contingent on the specific ways growth impacts the economy. The relative composition of different types of incomes might also affect tax buoyancy, for example. A study on the impact of changes in the composition of income at the (sub-national) state level indicated that declining relative amounts of wage income to transfer income significantly affected the buoyancy of the personal income tax (Fiscal Research Center 2009). Real economic growth can stimulate demand that brings more workers into the labor force, expanding the tax base, or raises

[32] If revenues disproportionately exceed growth, the state gains an increasingly larger amount of revenues each year absent new tax legislation. Disproportionate growth, that is, revenue growth that yields more revenues than would be commensurate with real economic growth, can stem from the differential manner in which growth affects parts of the economy, and changes in the relative composition of taxable income. Increased capital investments, for example, might diminish the revenue yield from either income taxes or payroll taxes, by diverting capital to non-taxed uses. Other changes that affect the growth of revenues relative to real economic growth include compliance rates and administrative costs of taxation, and the differential effect of growth on different sectors of the economy, which generate relatively more or less tax revenues. When taxes are buoyant, revenues increase proportionately more than real economic growth, and when they are not buoyant, they yield proportionately less revenues than real economic growth. Typically, tax buoyancy is calculated using the percent change in tax revenue divided by the percent change in GDP (Bird and Zolt 2003).

their wages, potentially moving them into higher tax rate brackets. Compliance and evasion trends can also affect tax buoyancy. If compliance is down or evasion increasing, then tax revenues diminish relative to general economic growth. Tax expenditures are another potential factor causing tax buoyancy to deviate from economic growth.[33] Tax expenditures often reduce the total taxable income independent of rate structures, so increased tax expenditure values can contribute to deviations in tax revenues based on economic growth.

Both the basic structure of the tax system and the buoyancy of a tax therefore speak to its political value. Income taxes, for example, typically draw revenues based on a percentage of earned income, which usually fluctuates according to economic conditions. Incomes will be higher with higher economic growth, and increase income tax revenues. Sales taxes on certain items could also generate increased revenues if economic growth means more disposable income is created, but may not, depending on the elasticity of the good being taxed. A mass income tax provides for increasing revenues based purely on economic growth and inflation (Steuerle 1992, 2008). Absent buoyant taxes, economic growth or inflation, political leaders would need to rely on discretionary tax increases for additional revenues. Tax system structures are different today based on their antecedents, varying quite dramatically even across the developed world (Rose 1985; OECD 2015) and between federal states (Bruce et al. 2006), and so levy different requirements on policymakers for discretionary tax changes cross-nationally.

[33] Tax expenditures reduce income tax liabilities for individuals and corporations based on specific criteria or behaviors. Tax expenditures are delivered through the tax code as deductions or exclusions that reduce the overall amount of taxes. The income tax deduction for charitable contributions is one such example.

Buoyant taxes will also grow relatively faster than taxes that are not (or are less) buoyant, leading to an increasing concentration of revenues in the buoyant taxes over time. Concentration is understood to mean an increasing percent of total revenue contributed by the buoyant taxes. Rose (1985) demonstrates that this has been the case across 17 OECD countries from 1955-1982, with an average increase in revenue concentration in the buoyant taxes (income, social security, VAT, and sales) of 20 percent. Taxes that are highly buoyant will generate more revenues over time compared with those taxes that are not buoyant, and thus will constitute an increasing percentage of total revenues, but will not require further legislation. Consequently, once buoyant tax structures have been established, elected leaders have less incentive to introduce or amend tax legislation, because changes to the revenue stream will be marginal.

Successful proposals for new taxes after a robust[34] national tax system has been established are usually motivated by interests other than revenue generation, such as influencing certain economic activities, streamlining bureaucracy, or accommodating social justice concerns (Rose 1985; Romer and Romer 2009; Tempalski 2013). The examples Rose uses are persuasive. One of Britain's two principal sources of revenue, the income tax, was inherited from the Napoleonic Wars; the other (social security taxes), from the introduction of social insurance prior to World War I. Thatcher's (1979-1983) conservative government in Britain pledged to introduce "radical" tax change that would have effectively altered only 2 percent of net tax revenue. I expect that political leaders

[34] A robust tax system is understood to be one that possesses a high capacity for revenue generation. This can mean either that the tax system generates a high average level of revenues, relative to some prior baseline, or that it possesses the potential to increase those revenues over time without additional tax legislation.

prefer to rely on the extant tax structure to generate revenues for war given the relatively small revenue effects of new tax legislation, rather than invite the potential for increased public scrutiny of their policies by raising new, war-related taxes. I provide empirical support for this claim in the following chapter.

Political leaders exploit the availability of high baseline taxes and the increasing revenues of a robust tax system in order to avoid introducing the potential for electoral risk related to new taxation or foreign policy scrutiny. When the revenue system is "robust," it provides high baseline revenues and increasing revenues over time, without discretionary changes to the tax code.[35] Incumbents will consequently rely on the baseline and increasing annual revenue stream to fund wars, in addition to continued use of debt, rather than raise war taxes. This "do-nothing" approach enables political leaders to reduce political risk potentially associated with taxation, and avoid the policy scrutiny that increased taxation invites (Rose 1985).

Path Dependence in Monetary Policy

Inflation isn't often considered a chic phenomenon to investigate, despite its important historical role in the devastation of many states, especially during wartime.[36] Kirshner (2001) attributes the under-theorization of inflation in recent decades as a

[35] Automatically increasing revenues will only occur when real economic growth is greater than zero. In the United States, this is typically the case. Zero to negative rates of annual real GDP growth have only occurred in the United States in 1946 (-11%), 1949, 1954, 1958 (-0.5%), 1974, 1975 (-0.5%), 1980 (0.0%), 1982 (-2.0%), 1991 (0.0%), 2009 (0.0%), or 10 years of the period from 1940-2015 (OECD 2016; US Bureau of Economic Analysis 2016).

[36] Inflation plagued twelfth-century China, for example, during a period of wartime expenditures by the government, after which point price levels increased forty-fold from 1160-1240. The French assignat's depreciation during the early 1790s provoked public protests, and increased printing resulted in several episodes of hyperinflation in revolutionary France (Tallman 1993). German hyperinflation following World War I is also often assigned a causal role in the state's subsequent economic decline.

problem of researchers' insufficiently differentiating economic from political inquiries. This study considers both the economic and political dimensions of inflation, looking to the evolution of economic beliefs about how best to manage inflation as the source of increased political capacity. My argument is that the development of monetary policy that effectively controlled inflation and stabilized inflation expectations alleviated the need to use war taxes as a counter-inflationary wartime tool. In order to understand how a war tax worked as a counter-inflation device, the hypothesized relationship between inflation, the economy, and fiscal policy should be elaborated. Inflation is understood to mean an increase in prices or in the cost of living in a state (IMF 2013).[37]

Just as Kirshner challenges Friedman's truism that "inflation is always and everywhere a monetary phenomenon," competing theories of inflation make different claims about its causes and costs. Inflation is characterized as the outcome of conflict between social groups, in a sociological formulation; inflation is considered as imposing real economic costs, according to the neoclassicals; in a modern political economy view, inflation is understood to increase government revenues and reduce its debt burdens; inflation is characterized as inherently value-neutral, but recognized to possess different distributional consequences for different actors, according to a micropolitics approach (ibid).

[37] The two most common measures of inflation include: the consumer price index (CPI), which calculates the cost increase in a basket of commonly purchased items relative to a base year, and consumer price inflation, which calculates the percent change in the CPI over a certain period. Many variations in consumer price measures, including core consumer inflation, which excludes more volatile good and energy prices, or the GDP deflator index, which provides an inflation rate for all goods produced in an economy, not just consumer goods (IMF 2013).

Whether inflation is characterized as inherently "good" or "bad" or "neutral," the historical record shows clear evidence that high or rising inflation has been a concern of wartime executives and populations. Far-ranging studies identify inflationary episodes as taking place in various political, fiscal, and monetary contexts, but have in common the "exploitation of monetary creation in times of extreme fiscal demands and insufficient tax revenue sources" (Tallman 1993, 2) that often occurs in wartime. Lessons drawn from the study of the Civil War signaled to policymakers the important role of taxation as a complement to debt finance and money creation—a means to avoid the soaring 25 percent inflation rates experienced annually during the conflict. In a classic study of wartime inflation, *History of the Greenbacks,* Mitchell (1903) showed that the value of greenbacks in terms of gold would fluctuate based on public expectations of the likelihood of gold redemption after the war, as proxied by battlefield successes (Thornton & Ekelund 2004). In the more recent past, President Gerald Ford declared inflation as "our public enemy number one," and launched a program of "whip-inflation-now" (Ford 1974). U.S. executives and publics demonstrate consistent concern for inflation during wartime, as I'll demonstrate in Chapter 4.

Wartime inflationary expectations are based on an understanding of two basic types of inflation: cost-push inflation and demand-pull inflation.[38] Higher-priced goods

[38] I avoid the use of a price-economy model that reflects a strict Keynesianism or a strict Monetarism, the two principle economic philosophies of the 20th century. I elect to use a generic model because of the continued contention over the appropriate inflation model. The Phillips Curve, the predominant inflation model of the 1960s, is still arguably valid today (see footnote 8), but has been conceptually differentiated into short- and long-term curves, which use different predictors for the rate of inflation. See Stock and Watson (2007) for a summary of the performance of forecasting models for U.S. inflation; Gordon (2013) on the continued validity of the Phillip's Curve; Atkeson and Ohanian (2001) on the utility of the Phillips Curve for forecasting inflation.

that result from increased production costs are characterized as cost-push inflation. Increased wartime costs of steel, for example, may drive up the producer's production cost, which is then passed on to the consumer in the form of higher prices. The increased aggregate demand for a good over and above the supply of the good can be characterized as demand-pull inflation. Demand-pull inflation can result from increased competition for goods, which drives up the price of those goods, until supply levels are adjusted to demand levels. Both types of inflation can result from the economic pressures of a wartime economy. Cost-push inflation may result from the increased costs in raw material inputs to production that occur from war-related trade disruption, the increased demand for those raw materials, or the increased wages needed to compete for skilled labor (presuming no price and wage controls have been imposed). Increased government purchases of war materiel or increased expenditures from businesses that supply the government with war-related goods and services may stimulate demand-pull inflation.

Taxes act in three ways to counteract these inflationary pressures during wartime (Blough 1944). First, taxes reduce the amount of consumer purchasing power by reducing income. Especially if a war economy is approaching full employment or the government does not control wages, wages may be higher than during peacetime, or laborers may work more hours, increasing their labor income above the usual amount and thereby increasing income. Increased taxes can reduce the amount of discretionary income generated by the war economy, inhibiting consumer spending. Even without changes in labor income, increased taxes reduce the amount of income the taxpayer can

use to purchase essential goods and services, acting as a damper on economic activity. The second primary way that taxes are understood to control inflation is the encouragement of private loans to government. Lenders are more likely to buy government bonds, private loans to the government, when they understand the future value of their investment to be secure. Because inflation reduces the future value of money—as a "tax" on capital—government spending without regard for inflation control can signal a potential intent to inflate away its debt by reducing the value of the debt. The third way in which taxes serve as counter-inflationary devices is by discouraging consumer spending. Fearful of tax increases in the future, consumers save more money.

A related driver of inflationary outcomes is public expectations of inflation. The theory of inflationary expectations recognizes the role of anticipated future price increases in driving the present behavior of economic actors. Expectations of inflation contribute to "inflation scares" that then create inflation, by surging demand, or exacerbate extant inflation, through the same mechanism (Goodfriend 2003). Monetary policy that seeks price stability without transparency initiatives to communicate intended inflation-rate targets to the public undercuts its own price stability efforts. Inflation expectations have been identified as driving wage and price increases, and laborers seek wages commensurate with expected price levels. Transparency initiatives makes central bank policy intentions explicit, increases the potential for public debate over monetary policy tradeoffs, and increases central bank accountability (Mishkin 1997).

Policymakers' perceived relationships between monetary policy and inflation inform the range of action we can expect from monetary policy. These perceptions reflected a strong belief in the utility of taxation as a tool for inflation control:

> "…it may be observed that the purpose of raising revenue itself is closely tied up with inflation control. Underling the purpose of raising revenue is a more fundamental purpose, that of avoiding the harmful effects which would follow if expenditures were indefinitely financed without taxation. Accordingly, no apologies are necessary in considering taxation as a means of inflation control" (Blough 1944).

Following the stagflation shocks of the 1960s and 1970s, the development of monetary policy from the 1960s to the 1990s relied on an improved and more sophisticated understanding of the economy that reshaped the way the central bank sought to control inflation. The central bank's adoption of an "implicit" inflation targeting framework was central to the bank's increased capacity for inflation control because it made inflation stability a priority for monetary policy and increased the bank's commitment to transparency (Goodfriend 2003). Although inflation models are still contested today, in terms of their predictive and explanatory potential, the Federal Reserve has demonstrated its credibility for price stability. The effects of monetary policy today are understood to bear on inflation in the long-run, while having only a transitory effect on unemployment and real growth (Mankiw 2001). This makes inflation of primary importance to the central bank; in the United States, it is one of two parts of the statutory dual mandate of the Federal Reserve, as legislated in 1977 (Federal Reserve Bank of Chicago 2016).[39] Despite the debates that still rage on regarding the causes and

[39] The Federal Reserve Act of 1977 identified the monetary policy objectives of the Federal Reserve as "The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long

costs of inflation,[40] the central bank's admission of responsibility for controlling the price level, and their efforts to communicate inflation expectations to the public, offer the executive a substantial capacity for inflation control. In combination, the achievement of a "post-inflationary" economy (Rivlin 2015) by the Federal Reserve alleviates the need for the executive to impose war taxes as a counter-inflationary measure.

Research Design, Operationalization, and Evidence

In order to demonstrate support for my hypotheses, I bundle the hypotheses conceptually into two main evidentiary objectives: The first is to establish that the institutional development of the federal tax system after World War II generated a significant baseline revenue capacity for the executive's use in the absence of new tax legislation; the second, is to demonstrate that the development of monetary policy effectively neutralized inflation as a driver for the use of war taxes to stem inflationary pressures. The following chapters are organized according to these analytical objectives.

With respect to the first analytical objective, I rely on U.S. historical evidence and statistics at the federal level. First, I show that the tax structure shifted from a primary reliance on indirect taxes to direct taxes during World Wars I and II. Next, I provide qualitative evidence of the expansion of the direct tax system during World War II that enabled the post-9/11 executive to avoid the war-related taxes that have characterized virtually every war in American history up through Vietnam. Then I quantitatively test

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run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and long-term interest rates" (12 USC 221).

[40] See Stock and Watson (2007) for a summary of the performance of forecasting models for U.S. inflation; Gordon (2013) on the continued validity of the Phillip's Curve; Atkeson and Ohanian (2001) on the utility of the Phillips Curve for forecasting inflation.

for a relationship between war taxes and income taxes that would reflect the hypothesized relationship, and find support for my argument. Next, I operationalize tax system capacity in terms of the buoyancy of the income tax system, since tax buoyancy provides a means to increase revenues without new legislation. In each step, I begin from the assumption that the executive generally prefers to avoid activities, like the imposition of new or additional taxes, which might increase public scrutiny of his policies. The explanation generates two hypotheses:

H1: As the tax system generates higher (lower) tax revenues, the probability of war taxes decreases (increases).

H2: As the tax system generates increasing (decreasing) revenues, the probability of war taxes decreases (increases).[41]

To support my second analytical objective of substantiating how the development of monetary policy effectively neutralized inflation as a driver for the use of war taxes, I again turned to mixed methods. First, I chronicle the development of monetary policy a the central bank from reflecting a basic understanding of inflation to a more sophisticated one that effectively stabilized prices and expectations of price increases. This success relied on inflation targeting and transparency initiatives at the Federal Reserve. Next, I conduct a structured-focused comparison of the Korea, Vietnam, and post-9/11 wars to

[41] By "increasing," I mean increasing more than proportionately with real economic growth (or nominal economic growth and inflation). If revenues disproportionately exceed growth, the state gains an increasingly larger amount of revenues each year absent new tax legislation. Disproportionate growth, that is, revenue growth that yields more revenues than would be commensurate with real economic growth, can stem from the differential manner in which growth affects parts of the economy, and changes in the relative composition of taxable income. Increased capital investments, for example, might diminish the revenue yield from either income taxes or payroll taxes, by diverting capital to non-taxed uses. Other changes that affect the growth of revenues relative to real economic growth include compliance rates, administrative costs of taxation, and changes in the tax base or tax brackets.

substantiate variation in the level of executive and public concern about inflation across the cases. Finally, I turn to quantitative analysis to determine if the perception of price stability is supported by economic data, both in terms of average inflation levels and in terms of correlations with war taxes. Two hypotheses result from my explanation:

H3: As monetary policy increases its capacity for price stability, the probability of war taxes decreases.

H4: As inflation or inflation expectations decrease (increase), the probability of war taxes decrease (increase).

Testing these four hypotheses will confirm or disconfirm my explanation that, after World War II, the institutional capacity afforded the executive eliminated the need for war taxes. The institutional development of both the tax system and monetary policy provided the baseline revenue capacity and price stability needed to prosecute wars without the resort to additional taxation. These developments reflect a high degree of institutional resiliency that enables the executive to pursue his policies without additional political action or public mobilization behind a war effort, reducing the potential for electoral sanctioning or increased foreign policy scrutiny.

In sum, my argument relies on two related factors to explain the obsolescence of war taxes for the United States after the end of the Vietnam War. First, the capacity of the income tax system alleviates the need for additional tax measures during wartime, since revenues are already high and growth is automatic. Second, the price-stable context in which the executive wages war obviates a need for counter-inflationary taxation. The executive can therefore leverage the state's significant institutional capacities without

further political action, and avoid the potential for increased public scrutiny that such political action may invite. Consequently, war taxes have obsolesced.

Conclusion

My institutional development explanation claims that institutional capacities are responsible for the obsolescence of war taxes in the United States in the post-Vietnam War era. Political leaders needed to impose war taxes in the past for two key reasons: either to generate revenues for a war's contemporaneous spending requirements, or to stem wartime inflationary pressures. Executives making decisions about war in the post-World War II context, however, are afforded the benefit of high status-quo tax revenues with which they can pursue their policies. War funds aren't generated on a "pay-as-you-go" basis anymore because the executive already has access to significant revenues streams, and ones that are automatically increasing over time. Without the necessity of raising funds for near-term expenditure, political leaders rely on status quo taxation during wartime to cover immediate funding needs.

The development of a robust tax institution during wartime episodes of the past provides the baseline revenues necessary for political leaders to stick with a "do-nothing" approach to taxation (Rose 1985). When a state's tax structure provides high baseline tax receipts and increasing revenues relative to economic growth, political leaders can maintain status-quo tax policies at the same time they provide for increased expenditures from state coffers. A soft rationalist ontology suggests political leaders weigh the costs of raising new taxes within their institutional contexts, and generally prefer to avoid

political actions that introduce more political risk or invite greater public scrutiny of their policies. Raising war taxes does both of these.

The institutional capacities developed in the tax system were complemented by subsequent developments in monetary policy. Initiated by the shocks of 1960's and 1970's stagflation, central bankers sought better mechanisms for inflation management. As monetary policy subsequently evolved over several decades, the central bank developed a greater capacity for stabilizing inflation and the public's inflation expectations. Using inflation targeting techniques and transparency initiatives, the Federal Reserve increased its capacity for price stability. Successful price stability alleviated the need to use war taxes as an offset to inflationary pressures during wartime, and further delinked war and taxes.

The implications of this research are many. First, institutional design is important to the sustainability of the state and its democratic accountability. The development of a robust tax institution that provides the state with a high level of and expanding revenue stream over time enables political leaders the potential to pursue their agendas with less political risk. Indeed, the public's exposure to the costs of war is a key component of the purported democratic accountability thesis (Kant [1795] 1957) that has been built upon by endless scholars (e.g. Morgan and Campbell 1991; Reiter and Stam 2002). Historically, taxation constituted a principal means by which the costs of war were born by the public. Without the connection between war and taxes formerly provided by war taxes, an important link between domestic and foreign policy is lost, with the potential end result of less public scrutiny of the executive's foreign policies.

Second, there is considerable potential that the absence of war taxes reduces the executive's burden to mobilize the public behind his foreign policies. Past necessities for immediate revenue and inflation control mechanisms led to the imposition of war taxes, the effectiveness of which depended on quasi-voluntary public compliance (Levi 1988). Without these necessities, the executive possesses less need for—and perhaps even incentives to avoid—public mobilization behind his foreign policies.

Third, there is also a strong potential that parallel institutional developments over the 20th century further expanded the state's capacity for war. The transition from a draft-based military manpower system to an all-volunteer, standing military force provides the state and its executive with a capacity for ready, rapid, and effective military action. Similar to the development of increased revenue and price stability capacities, the increased military manpower capacity likely also further reduces the burden of public mobilization for the executive. The executive simply no longer needs to rely on public support for or participation in a military draft for sufficient warfighting capacity. The creation of the all-volunteer, standing military force complements the revenue generation and price stability developments hypothesized to have taken place, further expanding the state's capacity for war.

Fourth, it is likely that the institutional development trends observed in the United States are in evidence cross-nationally. I explore some indications of similar patterns of institutional development across states in the developed West in the conclusion to the dissertation. Preliminary evidence suggests the development of similar institutional

capacities across various western states may help explain a broader trend away from the use of war taxation for contemporaneous war spending.

Lastly, the development of the institutional capacities I describe is potentially emblematic of broader shifts in the capacity of the state and its executive relative to the public. Given a reduced requirement for public mobilization to pursue war—in terms of revenue generation, inflation control, and military manpower—the public possesses less capacity to constrain the executive. With this insight, the continuation of costly and ineffective wars abroad for more than a decade gains new understanding. One hopes for increased effectiveness in electoral sanctioning as a check on executive policy autonomy, because the costs of war, it appears, will play no such role.

CHAPTER THREE: INSTITUTIONAL RESILIENCY FOR REVENUE GENERATION

My explanation for the obsolescence of war taxes relies on the development of the state's institutional capacity for war. Historically, the immense needs for contemporaneous spending necessitated war taxes designed to subsidize the war effort (Bank et al. 2008; Rockoff 2012; Thorndike 2009). Prior to 1913, the executive primarily relied on tariffs to fund the resource needs of the state (Brownlee 1996),[42] but even these generated only modest revenues. The introduction of the income tax as the primary means of tax revenue generation for war spending during World War II established a new revenue basis for the state. The post-war maintenance of this system provided the state with a robust baseline capacity for revenue generation as feature of the peacetime landscape.[43] Not only did the tax system achieve high rates of compliance and efficient administration, but it was also structured in such a manner as to enable increasing state revenues over time—without further tax legislation.[44] So robust was this

[42] An income tax was used during the American Civil War to generate the needed funds for war, but it's legality was challenged and it was eventually overturned by the Supreme Court in 1895. It was not until 1913 that the income tax was deemed constitutional via the 16th Amendment.

[43] A robust tax system is understood to be one that possesses a high capacity for revenue generation. This can mean either that the tax system generates a high average level of revenues, relative to some prior baseline, or that it possesses the potential to increase those revenues over time without additional tax legislation.

[44] By "increasing," I mean increasing more than proportionately with real economic growth (or nominal economic growth and inflation). If revenues disproportionately exceed growth, the state gains an increasingly larger amount of revenues each year absent new tax legislation. Disproportionate growth, that

capacity for revenue generation that it fundamentally shifted the purpose of post-war taxation away from contemporaneous spending needs to alternative motives, like redistribution and long-term growth. The tax structure reflects a strong path dependence in which the exigencies of 20th century wartime spending initiated the development of a robust tax system, while its subsequent evolution provided for increasing revenues over time, alleviating the need for contemporaneous war taxes to prosecute wars.

If you recall from Chapter 2, my explanation suggests two main hypotheses regarding the state's tax capacity:

H1: As the tax system generates higher (lower) tax revenues, the probability of war taxes decreases (increases).

H2: As the tax system generates increasing (decreasing) revenues, the probability of war taxes decreases (increases).[45]

In the following chapter, I set out to demonstrate that the U.S. income tax system provides the state with a robust revenue capacity that began with its implementation in the World Wars. In order to do so, I take several steps: First, I outline how the structure of a tax system evolved through the critical wartime periods of the first and second World

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is, revenue growth that yields more revenues than would be commensurate with real economic growth, can stem from the differential manner in which growth affects parts of the economy, and changes in the relative composition of taxable income. Increased capital investments, for example, might diminish the revenue yield from either income taxes or payroll taxes, by diverting capital to non-taxed uses. Other changes that affect the growth of revenues relative to real economic growth include compliance rates and administrative costs of taxation. That said, even if taxation only generates revenues that are in line with real economic growth, the government still yields more revenues than the year prior, assuming real economic growth is greater than zero. Buoyancy measures how well a tax generates revenues relative to real economic growth. Buoyancy values higher than one signify buoyancy, or tax revenue generation incommensurately higher than real economic growth; buoyancy values equal to one signify tax revenues commensurate with real economic growth; buoyance values less than one signify tax revenues lower than what real economic growth should generate. Typically, tax buoyancy is calculated using the percent change in tax revenue divided by the percent change in GDP (World Bank 2003).

[45] See footnote 3.

Wars. Next, I explain how the structure of a tax system can provide, to varying degrees, for increasing revenues automatically over time. I take into account tax instrumentation and economic conditions, and then quantitatively evaluate the probability of a war tax given income taxes. Next, I operationalize the robustness of the tax system in terms of tax buoyancy.[46] Finally, I turn to the shift away from revenue generation for contemporaneous spending needs in U.S. taxation more broadly, evaluating trends in post-war tax legislation. To conclude, I discuss the implications of my case study analysis and my quantitative findings for my research claim. Ultimately, the development of the U.S. tax system into one that offers the state a robust revenue capacity alleviates the need for the executive to legislate new taxes for war—and other—spending.

Institutional Development: War and the Revenue System

My explanation for the obsolescence of war taxes suggests that the development of a robust revenue capacity allows political leaders to avoid new tax legislation for war. Once a robust tax system has been established, political leaders can rely on the tax revenues primarily generated from past legislation to pay for their war expenditures, amongst other policies. The executive is thus able to avoid the increased political risk frequently associated with tax hikes, and the scrutiny they may invite on his policies. The executive is characterized as a rational actor that weighs the costs and benefits of political action according to the context for decision-making.

[46] Tax buoyancy measures how revenues vary with changes in real economic growth, supplying one potential explanation for the manner in which the tax structure might provide the government with increasing revenues even in the absence of new tax legislation. When taxes are buoyant, revenues increase proportionately more than real economic growth, due several intervening factors, and when they are not buoyant, they yield proportionately less revenues than real economic growth. See footnote 2.

The tax system in the United States underwent two major structural developments since the colonial period: the transition from indirect to direct taxation, and from a class tax to a mass tax. At the outset, the colonies relied primarily upon indirect forms of taxation, like tariffs from trade to generate revenues, as a result of the Constitutional provision against direct taxation, and which mandated indirect forms "unless in proportion to the census" (Brownlee 1996, 42). The legacy of the British Parliament's tax abuses figured strongly in the Constitutional prohibition against direct taxation at the federal level; direct taxes on property were better administered by localities to assure fair application (ibid). Wartime periods extensively leveraged the system of indirect taxation. The War of 1812 met with new customs duties, excise taxes on goods, and property taxes, all of which were eliminated after the end of the war (Witte 1985).

The first foray into a more direct system of taxation in the United States came under war conditions. Income taxes were first implemented as a result of the economic crisis of the Civil War and its consequent debt, which had risen to $505 million by 1862 (Witte 1985, 68). High wartime tariffs and excise taxes were also levied, accounting for roughly 20 percent of wartime expenditures (Brownlee 1996, 44). The new income tax was designed to raise revenues alongside the excise taxes and tariffs, and through its progressive rate structure, levy a more equitable burden on the poor. By war's end, the income tax had produced $61 million, or 21 percent of federal tax revenues in 1865, whereas excise taxes accounted for 50 percent, and tariffs 29 percent (Brownlee 1996, 47).

The post-Civil War years met with the gradual phasing out of the income and many of the excise taxes, and the maintenance of high tariffs and luxury goods taxes as the central instruments of the federal tax system. The income tax would be repealed by the Supreme Court in 1895 as unconstitutional, and remain so until the 16th Amendment was passed in 1913, preventing a more widespread adoption or continued peacetime use. Without the maintenance of a more robust revenue system in peacetime, the pattern of wartime tax increases would remain unchanged. Consequently, the pattern of taxation during the Spanish-American War (1898) mirrored the general dependence on indirect tariffs and excise taxes, with a few additional "sin taxes," rather than continue reliance on the newly illegal income tax.

The 1913 Constitutional amendment to legalize the income tax signified the beginning of the transition from indirect to direct taxation as the primary form of revenue generation for the state. The federal government was still heavily reliant on the indirect taxation of domestic goods and imports just prior to World War I, generating over ninety percent of federal revenues via tariffs and excise taxes (Witte 1985, 79). As the U.S. government faced declining tariff revenues due to the wartime disruption of trans-Atlantic trade with Europe upon the outbreak of war, however, the income tax acquired new utility. By the time war had been declared by the U.S. Congress, individual and corporate income taxes would make up sixteen percent of the federal revenues, and rise to an average of 58.6 percent of federal revenues from 1917 to 1920 (Witte, 1985, 79). The income taxes were heavily targeted on the rich, or those with an "ability to pay,"

even though this generated significant debate in Congress as marginal rates increased.[47] The World War I period thus met with a significant shift in the instrumentation of taxation and the revenues generated through taxation, which rose from $0.8 billion in 1917 to $3.7 billion a year later (ibid, 85). Even though the post-war environment would see significant tax reductions, the new internal revenue system established a ready structure for generating revenues more facilely than before the war. The new structure avoided the more elastic revenues from tariffs and excises, and somewhat defused interest-based debates that coincided with these historically prevalent forms of taxation.[48]

The next major transition for the federal tax system—the shift from a class tax to a mass tax—would come in another major period of war. World War II met with a similar dramatic fiscal change, although in this case, the change took the form of a massive expansion of the income tax base rather than a transformation of the predominant tax instruments. While World War I-era tax bills targeted upper incomes, the massive revenue requirements of the 1940s compelled lower exemptions to sufficiently expand the tax base (Stein 1996; Webber and Wildavsky 1986). Rather than collect taxes nearly exclusively from the rich, the extension of the federal income tax to nearly three-quarters of the population boosted the state's tax-based revenues considerably.

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[47] Witte notes the debate in Congress over denying the majority of the population their "patriotic right and privilege" to pay income taxes by focusing the tax on the wealthy (Witte 1985, 72).

[48] In general terms, the interests were generally differentiated between manufacturing, which sought high tariffs to promote consumption of domestic goods, and agriculture and labor, who believed they bore the brunt of those tariffs. For more on the realignment of interest groups behind the income tax, see Morgan and Prasad (2009, 1354).

World War II tax legislation significantly expanded the reach, and therefore the revenue-generating capacity, of the income tax. The Revenue Acts of 1940 made across the board tax increases, to include that of individual income, corporate income, excise, and excess profits taxes. However, the major changes to the structure of the tax system across these and the subsequent annual revenue bills came from the lowering of the personal income exemptions, which expanded the tax base dramatically. Whereas during World War I income tax affected 15 percent of households by 1918 (Brownlee 1985; Gilbert 1970), by the end of World War II, 90 percent of the labor force submitted tax returns, with 60 percent paying federal income taxes (Brownlee 2004, 115). This shift was undertaken incrementally, with the 1940 adjustment reducing the personal exemption amount from $2,500 to $2,000 for married couples; the 1941 bill dropping the exemption another $500 to $1,500; the 1942 bill reducing it a further $300 to $1,200, and the 1944 legislation dropping the exemption to a standardized $500 for individuals.

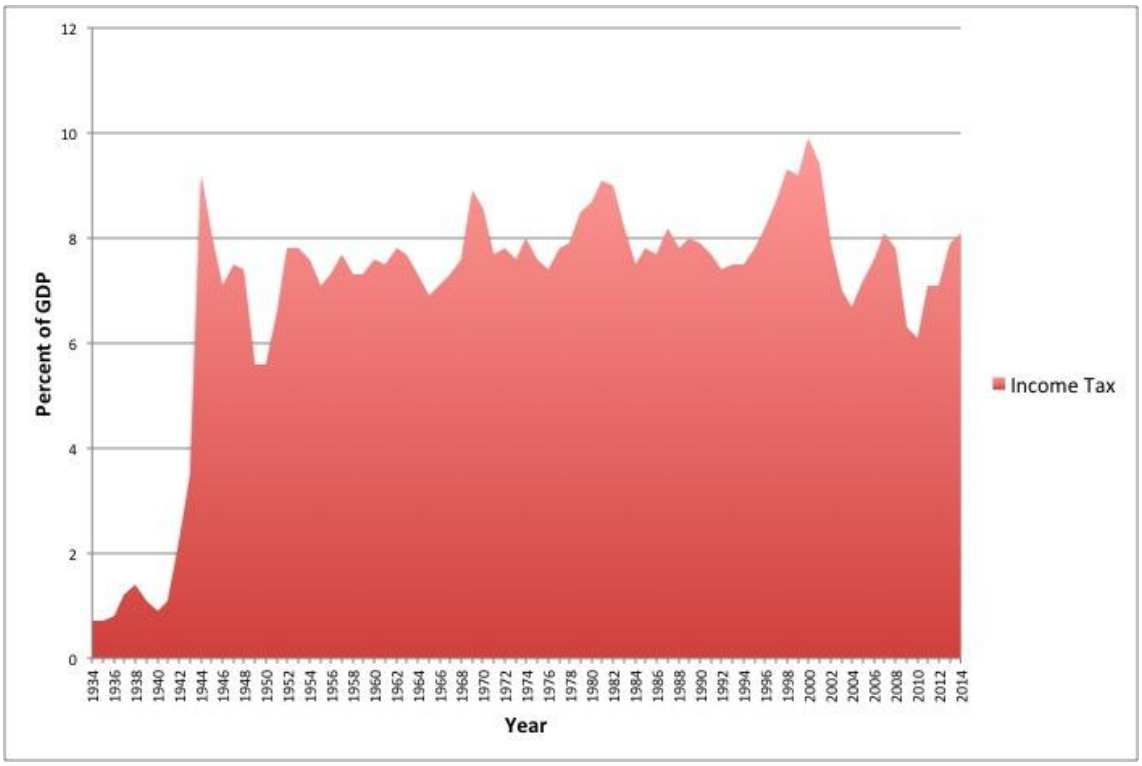

Figure 3.1. Income Tax Receipts as a Percentage of GDP, 1934 - 2014.
Source: Office of Management and Budget, Historical Tables, Table 2.3.

The revenue acts from 1940 to 1943 considerably changed the structure of the federal tax system, with a new heavy emphasis on the income tax. Figure 3.1 (above) illustrates just how significant this shift in the tax structure was relative to gross domestic product (GDP). The figure depicts a shift in the income tax from roughly one percent of GDP to between an average of 6 and 8 percent of GDP from 1942 to 2014. Two-sample means testing of the income tax as a percentage of GDP in the period from 1934 to 1939 and from 1939 to 2014 indicate that the means of the two groups are significantly different ($p < .01$). The summary and test statistics are listed in Table 3.1. (below). The early period is characterized by a mean income tax rate of 0.98 percent, as compared with

a mean rate of 7.4 percent in the later period.[49] Two-sample means testing of the income tax as a percentage of total federal receipts yields similar results, also displayed in Table 3.1. (below). This data supports the assertion that the structure of the federal tax system changed significantly during the World War II period, and provided substantially increased tax revenues relative to pre-war levels.

	Mean	Std Dev	*t*	*p*	N
Income Tax, Percent GDP					
1934-1939	0.98	0.29	-29.97	0.00	6
1940-2014	7.42	1.55	-29.97	0.00	75
Income Tax, Percent Receipts					
1934-1939	16.95	2.43	-21.64	0.00	6
1940-2014	43.45	6.24	-21.64	0.00	75

Table 3.1. Means Tests for Income Taxes, 1934-1939 and 1940-2014.
Source: Author's own calculations. Data from Office of Management and Budget, Historical Tables, Tables 2.2, 2.3.

Congress passed a Revenue Act in every year, and in some years, two, from 1940-1945. These acts were the means of the structural changes that transformed state extraction and extraction potential. The income tax became the central feature of the tax institution, key to the generation of peacetime revenues (Figure 3.1, above). "The postwar legacy is that individual levies became the leading federal revenue source" (Alexander 2000, 66). The quote from Alexander gets at half of the story of institutional development. The other half of the story is that the individual levies were extended to a majority of the public, and as such facilitated an enduring shift from not only indirect to direct forms of revenue extraction, but also from a class tax to a mass tax. The structure

[49] The variance of the two groups is unequal according to variance ratio tests. Shapiro-Francia W' and Shapiro-Wilk W tests for normality of data strongly suggest non-normality. Consequently, a two-sample t-test with unequal variances is used to test the means for both two-sample t-tests.

of this income tax system, both in terms of its instrumentation as an income-based tax and its applicability to a large segment of the population, yielded a significant capacity for revenue generation to the state.

As I'll demonstrate next, one reason for the obsolescence of war taxes in the United States is the development of a revenue system with a capacity for increasing revenue generation. With high and increasing tax revenues over time, the executive can avoid introducing the political risk or scrutiny that tax hikes invite.

The Federal Tax Structure

The federal tax structure is important for understanding how political leaders might avoid new tax legislation and instead rely on a "do-nothing" approach to funding a war effort (Rose 1985). The reason is that there are a number of factors that contribute to the revenue output of a tax than simply the tax rate. The effectiveness of the tax rate hinges on effective administration of the tax as well as on the size of the tax base for the tax (Brownlee 1996). As demonstrated above, the major wartime periods of the early 20th century met with significant changes in the structure of federal taxation. Tax rates not only underwent significant increases, but also changed in shape and scope, both of which contributed to the stability and robustness of the tax system over the long term. The tax structure itself possesses major implications for the resilience of the system and its ability to generate future revenues absent legislative change, which helps explain why war taxes have obsolesced in the United States.

A tax system can provide for increasing revenues over time, contingent on its design. Certain tax structures are more likely to generate revenue growth; for example,

income tax structures of either the flat or the progressive type have been found to grow faster than either a broad or a narrow-based sales tax (Dye and McGuire 1991). Given economic growth and inflation, an income-based tax structure is expected to automatically generate more revenues each year, alleviating the need for annual tax increases. As long as these increases are at least commensurate with growth (or a buoyancy greater than one), then the state gets more revenues for its coffers year after year. When revenue increases are disproportionately greater than real economic growth, a tax is considered highly buoyant, and actually generates increasing revenues for the state over time.[50]

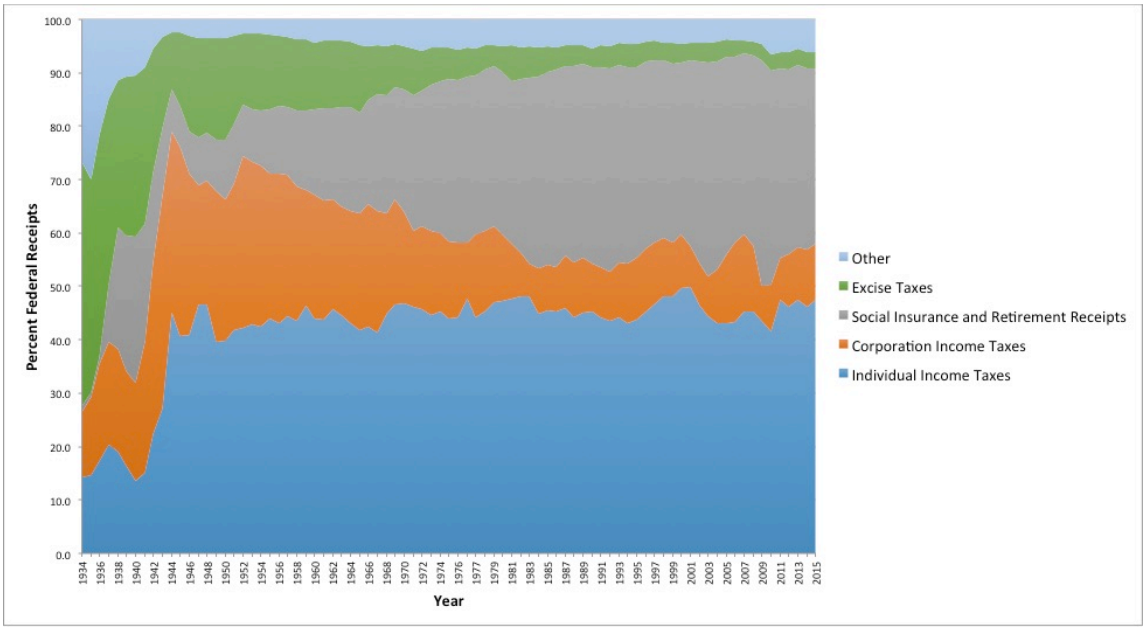

Figure 3.2. U.S. Federal Receipts by Type, Percentage of Total Receipts
Source: Office of Management and Budget, Historical Tables, Table 2.2.

How is it that a tax might generate more revenue than what real economic growth would produce? Economic growth and development directly affect both the

[50] Buoyancy is explained in greater detail in a later section of this chapter.

administration of a tax and the tax base to which the tax is applied. Development enhances the technologies available for tax administration and reduces their transaction costs, improving tax efficiency by generating more revenues per unit of oversight and management cost. Economic growth expands the incomes available for taxation, as more people earn incomes or incomes grow, enlarging the tax base (Brownlee 1996). Inflation is a further impetus behind increasing revenues via taxation. Inflation not only increases nominal incomes, so that taxpayers pay taxes on more income, but it also induces bracket creep, pushing those formerly in lower tax brackets into higher ones with higher tax rates. In fact, bracket creep contributed hundreds of billions of dollars to federal coffers in the United States until taxes were indexed to inflation in 1984 (Steuerle 1996, 422).[51]

Cross-nationally, tax structures vary dramatically in their ability to provide for increasing revenues based on economic growth and development.[52] Consequently, the literature on public finance has taken to evaluating tax policy and assessing its efficiency, stability, and economic adjustment potential. Developing states frequently calculate various measures of their tax systems' efficiency, and evaluate the effectiveness of different policies on revenue generation over time (see Upender 2008; Leuthold and N'Guessan 1986; Mansfield 1972). For example, a recent study on India's liberalization reforms determines that the buoyancy of corporate income tax is higher after reforms than before.

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[51] Steuerle (1996, 422 ff.) notes that the U.S. Treasury Department reports inflation indexing for taxes lowered government revenues by $57 billion by fiscal year 1990.

[52] The Conclusion to the dissertation will provide a more extensive discussion of cross-national trends in tax structures.

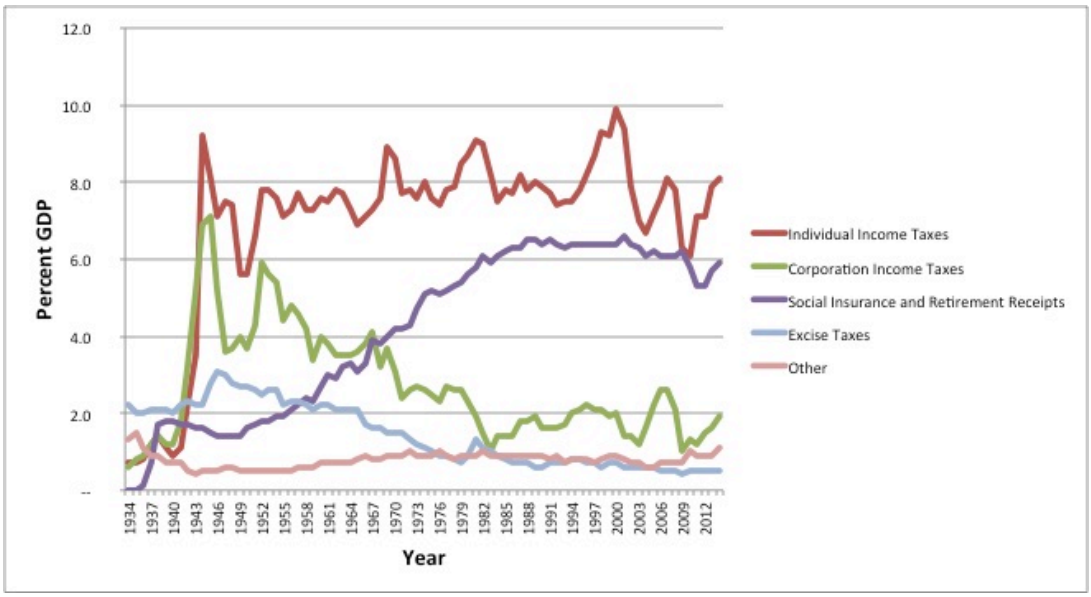

Figure 3.3. U.S. Federal Receipts by Type, Percentage of Gross Domestic Product
Source: Office of Management and Budget, Historical Tables, Table 2.3.

The first major structural shift in the U.S. tax structure came via the passage of the 16th Amendment in 1913. This constitutional change initiated the transition from a government reliant on indirect taxes to a direct tax basis (see Figures 3.2, 3.3.), as described above. The wartime period from 1914 to 1918 would meet with a temporary rise in income taxation targeted at the rich, but World War II would extend the new income tax instrument to nearly everyone. This transition to a system of direct taxation in the form of the growth-biased income tax on a large tax base enabled the development of a robust revenue capacity in the United States.

The income tax instrument would become increasingly important to revenue generation over time, as high tax rates on corporations lost favor in the post-war climate and indirect taxes were on the wane. Figure 3.2. (above) illustrates the shift in the composition of federal revenues over time, revealing the increasing importance of direct taxation to federal revenues. The figure shows that after World War II, the income tax

became the largest source of government revenue by far (as illustrated in the blue portion of the graph). As a percent of GDP, the income tax also surged in importance following World War II (Figure 3.3., above). Continued economic growth and then inflation expanded government revenues in the decades after World War II and into the 1960s (Steuerle 1996).

Ultimately, the development of the U.S. tax system into one centered on a high-growth and mass-based income tax offered good prospects for increasing revenue generation over time, without any further legislative or tax burden. Before turning to the larger structure of the U.S. tax system and its potential for generating increasing revenues over time, I test my hypothesis about the relationship between higher tax revenues and a lower probability of war taxes. In the following section, I estimate the effects of income tax on the dependent variable using regression analysis.

Assessing the Effect of Income Tax on War Tax

In order to test if there is an effect of income tax revenues on the probability of a war tax, I run a probit regression using the data from Flores-Macias and Kreps (2013) that I augment with additional variables and update to 2015. The probit regression provides an estimate of the effect of income tax revenues on the probability of a war tax, and includes in the sample all years that were "at risk" for a war tax (Flores-Macias & Kreps 2013). The sample therefore covers all years that the U.S. was engaged in the deployment of military force 1789 to 2015, which is almost every year in that range (Grimmett 2002). The dependent variable is war taxes, a binary indicator of whether a war tax is levied in a given year. The explanatory variable is income tax revenues as a

percentage of GDP. The data set includes a number of controls for the economy, the national debt, and political circumstances, like election years. Defense spending (as a percentage of GDP) is included in the model as it directly captures the demand for revenues directed towards a war effort. A GDP growth rate variable is used to control for increases in the revenues the state may leverage for the war, which could mean less necessity for a war tax. A debt-to-GDP ratio variable and a lagged debt-to-GDP variable are included to control for the possibility that debt levels are shaping the decision for war taxes. A dummy variable indicating whether a draft was used in a given year is also included to test for potential correlations between war taxes and the use of the draft. An inflation variable and its lag are included to reflect the argument I make about the joint utility of war taxes for revenue generation and inflation control. I also include the exogenous variable of election year, which may inhibit the executive's willingness to use a war tax for fear of electoral sanctioning.

I regress the war-tax dummy variable on the explanatory variable of income tax revenue as a percent of GDP to determine if there is a probabilistic relationship between income taxes and war taxes. If you recall, my hypothesis is that increasing tax revenues will decrease the probability of a war tax, all else equal. The hypothesis reflects the potential explanation that the obsolescence of war taxes in the United States is a function of the development of a robust income tax revenue capacity.

The regression results are presented in Table 3.2. (below). There is strong and significant ($p<.01$) relationship in the expected direction between the income tax revenue (as a percent of GDP) variable and the probability of a war tax, which indicates that

increasing values of income tax (as a percentage of GDP) result in a lower probability for a war tax to be used (relative to lower values of income tax as a percentage of GDP). Therefore, when income taxes (as a percentage of GDP) are relatively higher, as they have been after World War II, the results indicate a war tax is less likely. Conversely, when income taxes are lower (as a percentage of GDP), then the probability of a war tax is higher.

In order to understand the relationship between income tax and war tax more detail, I estimate the marginal effects of income tax (as a percentage of GDP) on the war tax variable. Marginal effects show the probability of the dependent variable taking a value of 1 (i.e. a war tax is used) given a specified value of the independent variable and holding all other variables constant at their means. The results are presented in Table 3.3 (below). Income tax as a percentage of GDP has fluctuated between 6 and 10 percent since World War II. When income tax is set at a value of 8 percent of GDP, the probability of a war tax is 4.5 percent. In other words, given the rough average rate of GDP in post-war America, there is a low probability of seeing a war tax. As the income tax value decreases, the relationship moves in the expected direction. For example, when the income tax as percent GDP variable is set to 0, the probability of a war tax more than triples, to 15 percent. It's important to note, however, that none of the marginal effects are significant at the standard levels, and the standard errors are relatively large, so these results must be evaluated cautiously.

Ultimately, the quantitative findings appear to support the hypothesis that rising income taxes as percentage of GDP will reduce the probability of a war tax. The

implication is that the development of a federal revenue system based on income taxation may alleviate the need to raise new taxes for war by providing the state with an already robust capacity for revenue generation.

DV: War Tax (Dummy)		
Independent Variable	Coefficient	P-Value
Military Service	0.749	0.141
(% total population)	0.509	
Draft Participation	-0.382	0.067*
(% total males eligible)	0.209	
Income Tax	-0.086	.013***
(% GDP)	0.035	
Debt	0.131	.080*
(% GDP)	0.075	
Lagged Debt	-0.133	.055*
(% GDP)	0.07	
Defense Expenditures	-0.244	.088*
(% GDP)	0.143	
Inflation	0.286	0.009***
(% Change CPI)	(0.110	
Lagged Inflation	-0.097	0.184
(% Change CPI)	0.073	
GDP Growth	0.016	.084*
(% Annual Change)	0.009	
Election Year Dummy	0.445	0.311
	0.44	
Draft Dummy	2.68	.001***
	0.79	
Constant	-2.8	.022**
	1.22	
Observations	111	
R2	0.54	

Table 3.2. Probit Regression Results of War Tax on Income Tax.
Notes: Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1
Source: Author's own calculations.

Marginal Effects		
Value of Independent Variable	Margin	*p*
Income Tax as %GDP = 0	.157 (.113)	.166
Income Tax as %GDP = 2	.120 (.086)	.163
Income Tax as %GDP = 4	.089 (.064)	.163
Income Tax as %GDP = 6	.064 (.047)	.169
Income Tax as %GDP = 8	.045 (.034)	.186
Income Tax as %GDP = 10	.031 (.013)	.218

Table 3.3. Marginal Effect of Income Tax on War Tax at Different Values of the Independent Variable.
Notes: The dependent variable is a dummy for war tax; the independent variable is income tax as percentage of GDP, which is given different values; all other variables are held constant at their means. Standard errors are in parentheses.
Source: Author's own calculations.

In the next section, I widen the aperture to include the income tax system's capacity for automatic revenue generation. I operationalize "robustness" by looking at the buoyancy of the American tax system, demonstrating it has high structural potential to provide automatically increasing revenues year-on-year. Subsequently, I provide evidence to suggest these revenue capacities have shifted the general purpose of taxation in the United States.

Institutional Capacity for Automatic Tax Revenues: Tax Buoyancy

A national tax system provides the critical resources needed for government provision of public goods, but the degree to which tax systems can do this varies. Tax buoyancy measures how revenues vary with changes in real economic growth, supplying

an explanation about how the federal income tax structure might provide the government with increasing revenues even in the absence of new tax legislation. Tax buoyancy measures give a sense of how well real economic growth will increase revenues absent further adjustments to the tax structure. If the U.S. tax system is highly buoyant, it may explain why additional tax revenues for contemporaneous spending, like war, are no longer necessary.

In order to operationalize what I term the "robustness" of the tax system,[53] I rely on a common measure of a tax system's ability to generate revenues and respond to economic growth called *buoyancy*. Calculating the buoyancy of a tax system offers a means of assessing how well the tax system responds to changes in real economic growth. Buoyancy measures reflect the automatic responsiveness of the tax system to economic growth rather than the responsiveness based on discretionary policy changes. Because I am interested in demonstrating how the executive might avoid the political costs associated with unpopular tax increases for war, I use tax buoyancy as an indicator of the capacity of the tax system to generate increasing revenues. According to my analytical construct, a tax system is robust if its buoyancy measures are greater than one.

It's important to note that buoyancy measures reflect the potential for automatically increasing revenues in excess of national income growth, assuming non-zero rates of growth. By "increasing," I mean the generation of revenues in excess of real economic growth (or nominal economic growth plus inflation). If revenues

[53] A "robust" tax system is understood to be one that possesses a high capacity for revenue generation. This can mean either that the tax system generates a high average level of revenues, relative to some prior baseline, or that it possesses the potential to increase those revenues over time without additional tax legislation.

disproportionately exceed growth, the state gains an increasingly larger amount of revenues each year absent new tax legislation. Disproportionate revenue growth can stem from the differential manner in which growth affects sectors of the economy, as well as changes in the relative composition of taxable income. If labor wages increase relatively more than other sectors, for example, then more revenues may be generated by the income tax than are expected by real GDP growth. Increased capital investments, as another example, might diminish the revenue yield from either income taxes or payroll taxes, by diverting capital to non-taxed uses. Other changes that affect the growth of revenues relative to real economic growth include compliance rates and administrative costs of taxation. That said, even if taxation only generates revenues that are in line with real economic growth, the government still yields more revenues than the year prior, assuming real economic growth is greater than zero.

A mass income tax already provides for higher annual revenues based purely on economic growth and inflation (Steuerle 1996, 420). Absent economic growth or inflation, political leaders would need to rely on tax increases for additional revenues. The U.S. has averaged about three percent inflation over the century from 1913-2013, and experienced only two decades of negative rates of inflation (or deflation) during that stretch. Gross domestic product growth in the United States has met with similar trends, averaging roughly two percent per year since 1880 (Jones 2015; Maddison 2008), as Figure 3.4. (below) indicates. These averages indicate that U.S. income tax revenues should be higher, year-on-year, throughout most of the last century (in years when real growth and inflation are greater than zero).

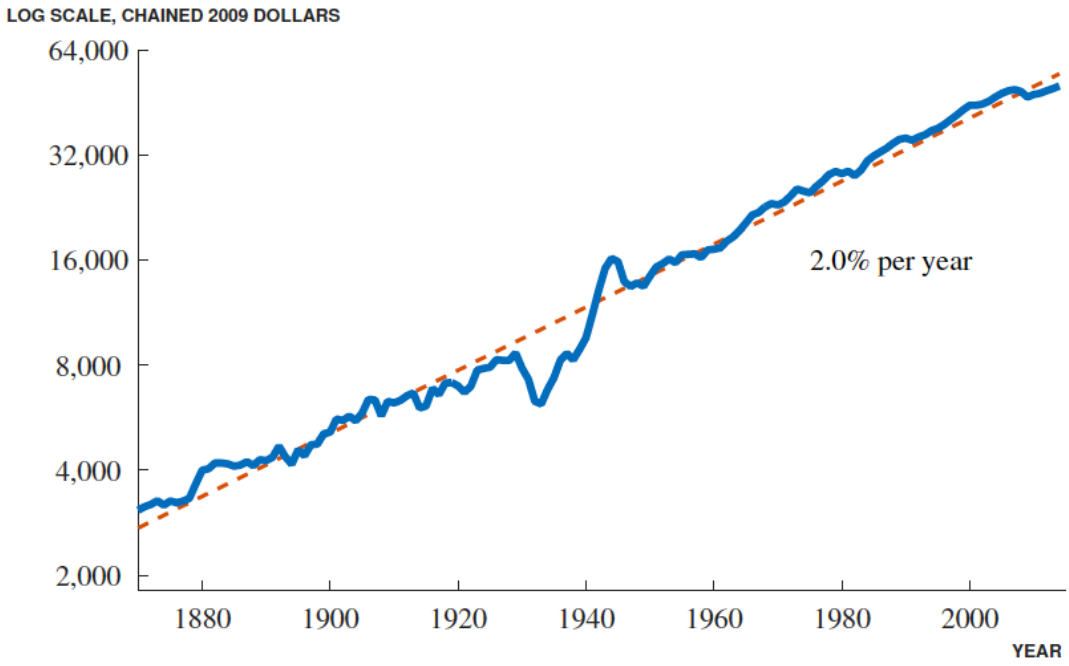

Figure 3.4. Gross Domestic Product Per Capita in the United States, 1870-2014.
Notes: Data from 1929-2014 are from the U.S. Bureau of Economic Analysis, NIPA Table 7.1; data prior to 1929 are from Maddison (2008).
Source: Jones 2015.

I calculate the buoyancy of income taxes both in the short- and long-term, following other researchers (Belinga et al 2014; Bruce et al 2006). Short-run buoyancy reflects the stabilization potential for taxes relative to GDP, while long-run buoyancy is important for understanding the impact of economic growth on long-term revenue growth (Belinga et al 2014). My short-run measures include annual, five-year, and ten-year averages, and my long-run measure uses data from 1934-2014. Tax buoyancy may vary considerably between short- and long-term estimates (Haughton 1998; Belinga et al 2014), so I calculate both the annual buoyancy and the five- and ten-year averages using the first estimation method described below. I follow the second estimation technique, the double log form equation, to calculate the buoyancy of U.S. income taxes across the period from 1934-2014, which offers a single long-run buoyancy figure. There are

several estimation techniques available for calculating buoyancy, as described by Haughton (1998).

One way to measure tax buoyancy is by calculating the change in tax revenue relative to the change in GDP:

$$b_t = \%\Delta T_t / \%\Delta Y_t$$

Where $\%\Delta T_t = [(Ti+1-T_i)/T_i]100$ is the percentage change in tax revenue from year i and year i+1 and $\%\Delta Y_t = [(Y_i+1-Y_i)/Y_i]100$ is the percentage change in GDP from year i and year i+1.

Alternatively, tax buoyancy can be calculated as the natural log of tax revenues regressed on the natural log of GDP:

$$\ln T_t = \beta + \delta \ln Y_t + \varepsilon_t$$

Where T is tax revenue, Y is the real GDP, β is the constant, δ is the tax buoyancy and ε is the error term.

The buoyancy measures can be interpreted as follows: A coefficient that is greater than one indicates higher revenue growth as compared with GDP growth (or a highly buoyant tax); a coefficient equal to one indicates revenue growth commensurate to that of GDP growth (a tax buoyancy equal to one); a coefficient less than one indicates revenue growth less than GDP growth (a low tax buoyancy). If a tax has a buoyancy of one, then revenues increase proportionally to GDP, so a five percent increase in GDP prompts a five percent increase in revenues. The implication is that as long as an economy is growing and buoyancy ratios are at least at a value of one, the government will see higher

annual revenues. If the tax buoyancy is higher than one, it means the government can expect revenues to increase more than real economic growth would suggest.

In order to isolate the effect of income taxes specifically, I calculate income tax growth (percent change in annual income tax revenues) relative to annual GDP growth, rather than use an aggregate measure of total revenues. Total revenues would demonstrate the buoyancy of the tax system overall, but fail to show how income tax alone provides a basis for automatically increasing government revenues. Because the major structural reforms to the tax system during World War II involved the widespread implementation of and expansion of the income tax system, it is important to evaluate its particular effects on tax revenues, and potential role in explaining the obsolescence of war taxes.

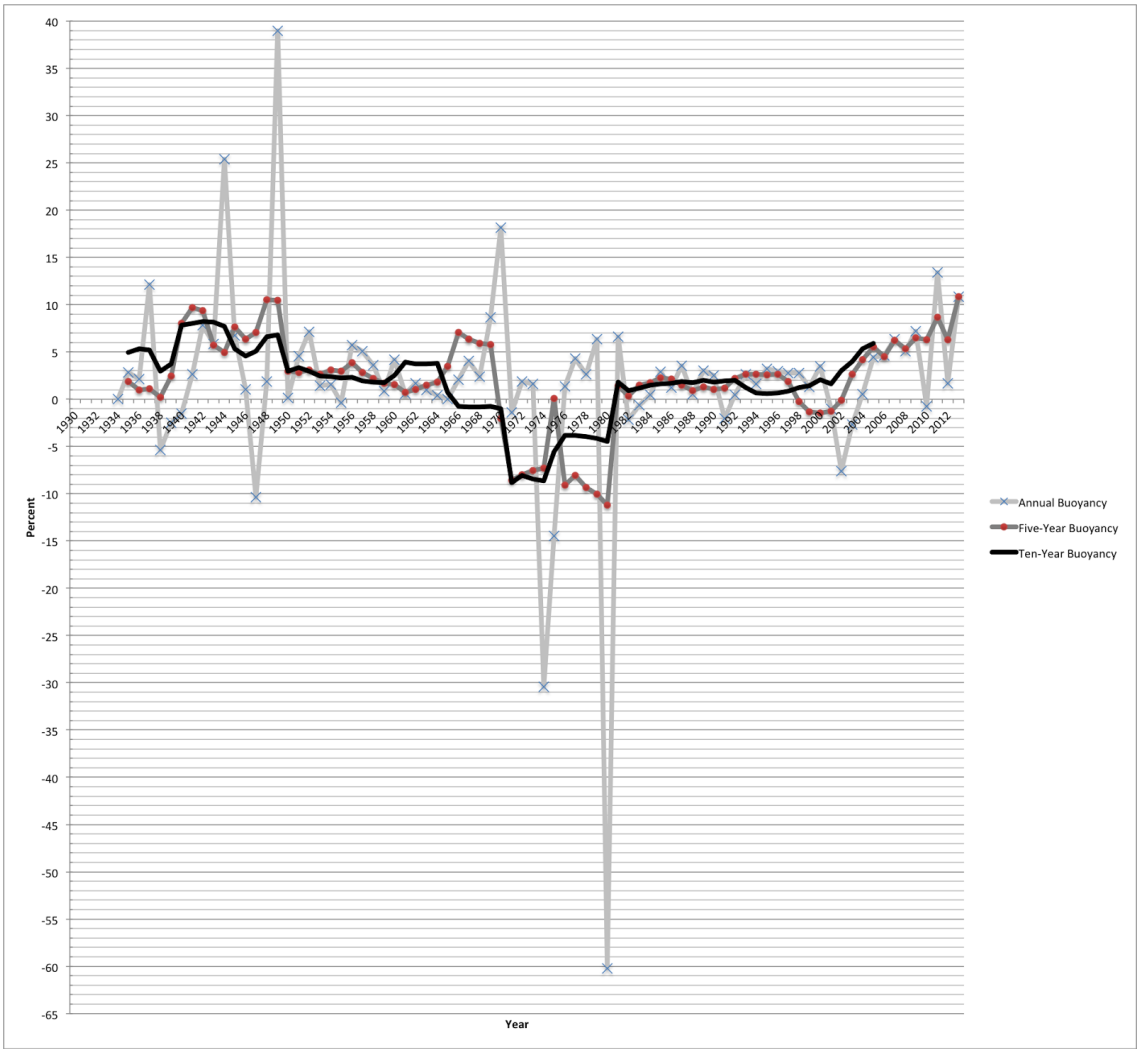

Figure 3.5. Income Tax Buoyancy Measures for the United States, 1934-2014.
Notes: Averages calculated using estimation technique $b_t = \%\Delta T_t / \%\Delta Y_t$. See above for further detail.
Source: Office of Management and Budget, Table 2.1 Receipts by Source: 1934-2021, figures for income tax revenues; Bureau of Economic Analysis Table 1.1.1., Percent Change From Preceding Period in Real Gross Domestic Product.

U.S. Income Tax Buoyancy, 1934-2010	
Income Tax	1.19*** (0.03)
R^2	.94
Intercept	-4.20

Table 3.4. Linear Regression Results on Tax Buoyancy.
***Significant at p<.01.
Source: Author's own calculations, based on data from Office of Management and Budget, Table 2.1 Receipts by Source: 1934-2021, figures for income tax revenues; Bureau of Economic Analysis Table 1.1.1., Percent Change From Preceding Period in Real Gross Domestic Product.

My findings for the first estimation technique suggest that the United States possesses a highly buoyant income tax system. Figure 3.5. (above) illustrates the income tax buoyancy by one-, five-, and ten-year tax buoyancy averages. The chart shows that, generally, income tax buoyancy remains at levels greater than one, and in many periods far exceeds one, with only a few periods falling below 1. The implication is that the income tax system overall is highly buoyant, and has generated, on average more revenues than was commensurate with economic growth (as measured by real GDP). Figure 3.5 (above) also shows a surge in the ten-year buoyancy measures (black line) right around the World War II expansion of the income tax in 1940 and continuing until the beginning of the Korean War in 1950, when two significant tax bills were passed. Note that although the ten-year buoyancy line moves gradually downward until 1959, and then briefly upward from 1959-1964, it isn't until about 1965 that income tax buoyancy dips under one. From 1965-1981, the averages indicate that tax buoyancy was uncharacteristically low, but then resumed a highly buoyant measure after about 1981. So although the income tax does experience periods of low buoyancy, the trend line indicates generally high buoyancy measures, and reflects a buoyancy surge of sorts around the beginning of World War II.

The ordinary least squares regression analyses of the double log form equation also support this general observation of highly buoyant income taxes. As Table 3.4 (above) shows, the coefficient for the income tax is 1.19, indicating that the average buoyancy from 1934-2010 is well above one and has provided disproportionately increased revenues for the government relative to GDP growth. The results indicate that

both short-term and long-term buoyancy measures are greater than one. The income tax system should therefore be considered to be a good stabilizer for short-term economic fluctuations while also contributing to long-term fiscal sustainability. According to my analytical criteria, the U.S. tax system can be classified as robust, or possessing the capacity for increasing revenues over time.

Trends in General U.S. Taxation after World War II

My argument about the shift in the state's revenue capacity after World War II makes the case that the executive can rely on status-quo revenue generation for war—that is, she can avoid raising war taxes for contemporaneous spending needs. If these revenue capacities enable the prosecution of war without additional taxation, might they also enable spending for purposes other than war as well? Extending the logic of my institutional capacity argument beyond war taxes suggests that the state possesses sufficient capacity for various spending needs beyond just war. If institutional capacities alleviate the need for additional taxation, why are taxes still raised today? Status-quo institutional capacities have essentially alleviated the need for meaningful changes to revenue generation, such that tax legislation today often seeks ends other than revenue generation for contemporaneous spending needs. This allows the executive the freedom to make revenue adjustments at the margins and engender political support from those who will benefit from different tax structures, rather than be constrained by immediate or substantial revenue requirements.

If status-quo revenue capacities are indeed sufficient means for meaningful revenue generation after World War II, then we should find evidence that the motives

behind taxation and their revenue effects are different over time. In order to investigate if the motives behind taxation have changed over time, I turn to economic research on various motives for taxation. Economists have identified four chief reasons for raising taxes, in general: increased spending, countercyclical effects, deficit reduction, and long-run growth (Romer and Romer 2009, 5). A tax changed motivated by increased government spending is characterized as a "spending-driven" tax change, the classic example of which is a war tax (ibid). But large increases in the introduction of a major new social welfare expenditure, like Medicare, might provide a similar drive to raise revenues through taxation (ibid). "Countercyclical" taxes are used to normalize output growth, as in the case of an economic recession or inflation. "Deficit reduction-driven" tax changes seek to reduce an extant budget deficit and, unlike spending-driven taxes, do not co-occur with contemporaneous spending increases (ibid). In Romer and Romer's (2009) framework, tax legislation that calls for an immediate spending increase but only delayed taxation (effective greater than one year from the spending increase) is characterized as deficit-driven. Finally, long-run tax motivations seek to provide for long-run growth through any number of changes to efficiency, equity, incentives, or small-government ideologies.

Evaluating the effects of changes to taxation is complex and relatively crude process. Romer and Romer 2007 highlight the several papers that make attempts to assess impacts of changes in the level and structure of taxation on consumption, short- and long-run economic health, and government spending, but note that the two most common measures, overall change in revenues and change in cyclically adjusted

revenues, are still "quite crude." U.S. Treasury's Office of Tax Analysis makes these same points about the difficulty of estimating the revenue effects, in particular, of tax bills (see Tempalski 2006, 2013). For every tax bill legislated, usually some estimate of the projected revenues is available, but the sources differ in their methodologies and availability. For example, the Joint Committee on Taxation (JCT), or its predecessor, the Joint Committee on Internal Revenue Taxation (JCIRT), often produced revenue estimates for tax bills, as they do today. However, across the 1940-1967 period, Treasury Department estimates or the Congressional Record had to be consulted as sources of estimates in years of missing reports from the JCT or the JCIRT. Additional difficulties in calculating tax revenues arise from the temporary nature of many tax provisions, their delayed enactment, or their retroactive application (Tempalski 2006, 6-7). The government revenue estimates used as the basis for analyzing the effects of tax legislation also do not include the effect of the tax bill on GDP (ibid). For all of these reasons, one must proceed carefully in evaluating how tax bills vary in their effects. Nevertheless, the federal government still relies on revenue estimates to gauge the impact of new tax legislation, which makes them useful for assessing tax motives.

Because my argument makes the case that the revenue and price stability imperatives of the past no longer drive the use of war taxes, it is important to explore the nature of the tax changes that are legislated as a point of reference. Why might political leaders avoid raising some, but not all, taxes, if taxes are generally disliked and considered unpopular by the American public? Both revenue estimates and tax bill motives (from Romer and Romer 2009) elucidate why we find variation over time in the

purpose of taxation more generally, and point to increased institutional capacity as a primary factor explaining changes in the structure of general taxation.

	Mean	Std Dev	*t*	*p*	N
Income Tax, Percent GDP					
1934-1939	0.98	0.29	-29.97	0.00	6
1940-2014	7.42	1.55	-29.97	0.00	75
Income Tax, Percent Receipts					
1934-1939	16.95	2.43	-21.64	0.00	6
1940-2014	43.45	6.24	-21.64	0.00	75

Table 3.5. Means Tests for Income Taxes, 1934-1939 and 1940-2014.
Source: Author's own calculations. Data from Office of Management and Budget, Historical Tables, Tables 2.2, 2.3.

Above, I established the basis for my claim that the structure of the tax system underwent dramatic transformation during World War II, pointing to the large shift in the role of the income tax in the pre- and post-war periods. Income tax as a percentage of GDP rose from an average of one to two percent in the pre-World War II period to between six and eight percent in the post-war period. Means testing indicates that income tax averages in the pre- and post-war periods are statistically different, and their values reflect large shifts in the relative contribution and importance of the income tax to the state's revenue generation capacity (Table 3.5., above). Income taxes in the pre-war period comprised just 17 percent of total federal revenues, while the post-war period saw that figure rise to an average of over 40 percent (Table 3.5., above).

Revenue analyses of the major tax bills in the post-World War II period are also consistent with an institutional capacity explanation. Table 3.6. (below) shows the trends in taxation in the major tax bills from 1940 to 2006, both as a percentage of GDP and as a

percentage of total tax receipts. From this table, one can clearly identify the tax bills of the World War II period as the most significant tax increases across the whole period. The Revenue Act of 1941, for example, is estimated to have generated a revenue increase of 2.2 percent of GDP, or 32.1 percent of total federal receipts, in the first full year after enactment. The following year, the Revenue Act of 1942 generated just over a 5 percent increase in tax revenues relative to GDP, or an increase worth 71.4 percent of federal receipts. The years immediately following these bills also meet with large tax increases, until large tax cuts come about in 1945 and 1948. Importantly, these 1945 and 1948 tax cuts (at -2.67 and -1.87 percent of GDP, respectively) are not near the relative magnitude of the 1940 through 1942 tax increases that established a robust revenue capacity for the federal government. In other words, although the post-World War II tax cuts did reduce revenues from high wartime levels, they nevertheless left peacetime federal tax revenues much higher than pre-war levels. Furthermore, just a few years later, war taxes during the Korean crisis returned revenue levels to near their World War II levels—a level from which they've never receded. No tax bills outside of these World War II years come close to rivaling these bills' revenue generating capacity in relative terms, across the whole period from 1940 to 2006. World War II-related tax increases established a significant revenue capacity that was never fully reversed in the post-war period, and which has alleviated the economic burden of raising war revenues via taxation.

Major Tax Bill	Estimated Revenue Effect	
	% GDP	% Federal Receipts
Revenue Act of 1940	0.91	15.30
Second Revenue Act of 1940	0.71	11.60
Revenue Act of 1941	2.20	32.10
Revenue Act of 1942	5.04	71.40
Current Tax Payment Act of 1943	1.16	6.20
Revenue Act of 1943	0.46	2.40
Individual Income Tax Act of 1944	-0.27	-1.30
Revenue Act of 1945	-2.67	-13.10
Revenue Act of 1948	-1.87	-11.30
Revenue Act of 1950	1.33	9.60
Excess Profits Tax of 1950	0.97	6.80
Revenue Act of 1951	1.52	9.00
Excise Tax Reduction Act of 1954	-0.24	-1.50
Internal Revenue Code of 1954	-0.04	-0.20
Revenue Act of 1962	-0.03	-0.20
Revenue Act of 1964	-1.60	-9.00
Tax Adjustment Act of 1966	0.60	3.50
Revenue and Expenditure Control Act of 1968	1.74	9.40
Tax Reform Act of 1969	0.39	1.90
Revenue Act of 1971	-0.38	-2.20
Tax Reduction Act of 1975	-0.58	-3.20
Tax Reform Act of 1976	-0.81	-4.10
Tax Reduction and Simplification Act of 1977	-0.85	-4.30
Revenue Act of 1978	-0.49	-2.50
Crude Oil Windfall Profit Tax Act of 1980	0.44	2.20
Economic Recovery Tax Act of 1981	-1.21	-5.70
Tax Equity and Fiscal Responsibility Act of 1982	0.53	3.00
Highway Revenue Act of 1982	0.05	0.30
Social Security Amendments of 1983	0.17	0.90
Interest and Dividend Tax Compliance Act of 1983	-0.07	-0.40
Deficit Reduction Act o 1984	0.24	1.30
Consolidated Omnibus Budget Reconciliation Act of 1985	0.02	0.10
Tax Reform Act of 1986	0.41	2.30
Omnibus Budget Reconciliation Act of 1987	0.19	1.00
Omnibus Budget Reconciliation Act of 1989	0.10	0.50
Omnibus Budget Reconciliation Act of 1990	0.41	2.20
Omnibus Budget Reconciliation Act of 1993	0.36	2.00
Small Business Job Protection Act of 1996	-0.01	0.00
Tax Relief Act of 1997	-0.11	-0.60
Economic Growth and Tax Relief Reconciliation Act of 2001	-0.33	-1.70
Job Creation and Worker Assistance Act of 2002	-0.42	-2.40
Jobs and Growth Tax Relief Reconciliation Act of 2003	-1.19	-6.30
Working Families Tax Relief Act of 2004	-0.22	-1.30
American Jobs Creation Act of 2004	-0.03	-0.20
Tax Increase Prevention and Reconciliation Act of 2005	-0.27	-1.50
Economic Stimulus Act of 2008	-0.79	-4.30
Bank Bailout Bill of 2008	-0.70	-4.40
American Recovery and Reinvestment Tax Act of 2009	-0.59	-3.90
Patient Protection and Affordable Health Care Act of 2010	0.05	0.40
Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010	-2.68	-15.80
American Taxpayer Relief Act of 2012	-1.69	-8.20

Table 3.6. Revenue Effects of Major Tax Bills, 1940-2012.
Notes: Revenue Effect is estimated for the first full year after enactment. Shaded cells reflect estimates of revenue negative effects resulting from the associated tax bill.
Source: Tempalski 2013, U.S. Treasury.

The next-largest tax increases across the entire period from 1940 to 2006 coincide with the Korean and Vietnam Wars. This evidence appears to support my claim that, despite significantly higher baseline revenues after World War II, war taxes were still used to play a dual role in generating revenues for contemporaneous war spending and countering inflationary pressures. If this is the case, we should expect to see tax revenues higher in relative terms from Korean and Vietnam War tax bills than peacetime tax bills, and lower than during World War II. Certainly, one must consider that the revenue demands of World War II were greater in absolute terms and as a percentage of GDP than the Korean and Vietnam conflicts. But higher post-World War II peacetime tax revenues also meant less additional revenues needed for war purposes, or that revenues could be diverted from their peacetime uses to the two war efforts, resulting in overall lower tax increases to raise funds for the Korean and Vietnam conflicts. Indeed, the three Korean War tax bills—two 1950 tax bills and one 1951 tax bill—raised revenues on order of 1.33, 0.97, and 1.52 percent of GDP, respectively. These revenue figures are significantly lower than World War II tax revenues, but also significantly higher than estimated peacetime tax revenues from 1942 to 2006 (see Table 3.6., above), lending support to my argument about the role of war taxes in the post-World War II environment. The Vietnam War period meets with the next two largest post-World War II tax increases, raising revenues in 1966 worth 0.60 percent of GDP (or 3.5 percent of federal receipts) and in 1968 worth 1.74 percent of GDP (or 9.4 percent of federal receipts). Again, in relative terms, these figures support the claim that the primary

impetus for war taxes in the post-World War II period was inflation control, rather than revenue generation, even though war taxes contributed to both.

	Tax Bill Motivation Count							
	Spending-Driven		Countercyclical		Deficit-Driven		Long-Range	
	Revenue Effect							
Years	+	-	+	-	+	-	+	-
1945-1956	5	3	0	0	1	0	0	2
1957-1969	7	0	3	0	3	0	0	8
1970-1982	3	0	1	4	0	6	3	7
1983-1995	0	0	0	0	2	0	1	5
1996-2007	0	1	1	2	2	0	1	2
Subtotal, by Motivation and Revenue Effect	15	4	5	6	8	6	5	24
Totals, by Motivation	19		11		14		29	
Percentage of Total, by Motivation	26		15		19		40	

Table 3.7. Count of Tax Bill Motivations, 1945-2007.
Source: Author's own calculations, using data from Romer and Romer 2009, Table 1. See Appendix for Table 1.

Trends in peacetime tax legislation after World War II also support my argument that institutional capacity alleviates the necessity of drumming up significant new revenues through taxation. This is not to suggest that elected leaders have no emergent revenue needs that cannot be covered by extant tax provisions, but rather that the tax legislation undertaken in the post-World War II period is motivated primarily by factors other than revenue generation and inflation. Spending-driven tax bills, in other words, achieve only marginal changes in revenues, and the majority of tax bills are characterized as motivated by concerns other than increased contemporaneous spending. Romer and Romer's (2009) analysis of the motives behind major post-World War II tax bills reflects just such a trend (Table 3.7, above).[54] Approximately 74 percent of the post-World War II tax bills coded by the researchers are identified as motivated by factors other than increased spending. Only 19 out of 73, or 26 percent, of total tax bills from 1945 through

[54] Romer and Romer (2009) undertake a qualitative analysis of the major tax bills in the post-World War II period, using contextual evidence from speeches, public statements, and official documents (e.g. Economic Report of the President) from both the executive and legislative branches to code a particular tax bill according to their typology (i.e. spending, deficit, countercyclical, or long-range motives). They then count the instances of each type of bill in each year from 1940-2007.

2007 are coded as motivated by spending, and of these, about one-quarter reduce rather than raise revenues (Table 3.7, above). Long-range motives account for the largest percentage of tax provisions from 1945 through 2007 at 40 percent of the total, while countercyclical and deficit-reduction motivations account for 15 and 19 percent respectively (Table 3.7, above). Recall that tax bills coded as having long-range motives by Romer and Romer (2009) are identified as having any number of long-range growth objectives, based on equity or efficiency concerns, or particular ideologies. Notably, only 3 of 11 total countercyclical tax provisions occur after 1990, supporting the potential that inflation is less important for war tax policy after 1990, as I assert in the subsequent chapter.

Further evidence that post-World War II tax legislation is motivated by concerns other than revenue generation is found in U.S. Treasury data on the estimated revenue effects of major tax bills from 1940 to 2007. Returning to Table 3.6. (above), we observe peacetime tax bills between 1945 and 1967 are all revenue negative; that is, they either cut taxes or restructured taxes in ways that generated less revenues than would have been generated without the new tax legislation. From 1968 to 2006, peacetime tax bills are either negative or generate revenues between .02 and .53 percent of GDP in their first full year after enactment. Excluding Cold-War tax bills, all tax bills are revenue negative save two, in 1990 and 1993, which respectively generated revenue increases of .41 and .36 percent of GDP. As the revenue projections for each of the major tax bills from 1968 to 2007 are extended out beyond the first year after enactment, a few generate modestly increasing revenues, but many others generate significantly reduced tax revenues. The

absence of sufficient data precludes analysis of the revenue effects of major tax bills from 1940 through 1967 beyond one year following enactment (Tempalski 2006). On the whole, however, no tax bills even approach the tax increases made during the World War II period; rather, any bills increasing net revenues make only very modest changes to the revenue stream. And recall that even though the tax increases of the World War II period were moderately reduced following the war, they are never fully reduced to pre-war levels, and were raised once again in 1950 and 1951. The implication is that the tax increases generated in World War II and largely sustained in the post-war period continue to provide significant institutional capacity to the state and its leaders. Considering the key role the executive plays in wartime as head of foreign policy and commander-in-chief, these institutional capacities are expected to bear on his ability to wage war.

The net effect of tax legislation after World War II, then, appears to only marginally impact federal revenues, and even then, these revenue effects are often negative. This evidence seems to support the findings from Romer and Romer (2009) that characterize the majority of post-World War II tax provisions as motivated by long-run factors like improved equities, efficiencies, or incentives, rather than increased government spending. The implication is that the executive can pursue policies that rely heavily on status-quo revenues while making adjustments at the margins to engender political support from those who will benefit from different tax structures. The absence of this institutional capacity in the pre-World War II context created real revenue needs that could be achieved through war taxes. Post-World War II, however, the evidence

points to less necessity for revenue generation and more interest in tax structures as political tools for accommodating various interests.

Conclusion

The tax institution in the United States as we know it today reflects a high-degree of path dependence. Its structure is the outcome of both the immense revenue needs of 20th century wars and the particular form that meeting those revenue needs took. By designing a system that relied on income tax, a relatively high-growth instrument, and a tax base that incorporated the masses, the U.S. established an institutional structure that provided for high levels of and automatically increasing growth. Indeed, my findings suggest that as these income tax levels grow, they are less likely to result in war taxes.

These research findings suggest that beyond the revenue increases provided via economic growth and inflation, U.S. political leaders enjoy a robust tax system that increases their revenues automatically without further tax legislation. With a highly buoyant tax system, the tax base is responsive to changes in economic conditions and generates more revenue for the state than is proportional to economic growth. Given these automatic revenue increases, political leaders can not only anticipate future revenue growth but can also avoid the potential political costs associated with increased taxation. This automaticity means that contemporary political leaders can rely on the charged moments of wartime history to guarantee their revenue growth into the future.

When taxes are raised for various purposes unrelated to war, the evidence suggest political leaders are likely most interested in objectives other than revenue generation for contemporaneous spending. Rather than make meaningful changes to the revenue

stream, tax legislation instead can serve as a political tool to serve specific interests, to support particular ideologies, or to facilitate economic growth. Insofar as it generates high baseline revenues and that these revenues are automatically increasing over time, the state's revenue capacity can be interpreted as providing the state with an institutional resiliency for war. This institutional resiliency significantly reduces the requirement for additional political action or public mobilization to secure the resources necessary for war. Consequently, the executive can avoid a turn to war taxes, and the potential for political risk that they invite.

CHAPTER FOUR: INSTITUTIONAL RESILIENCY FOR PRICE STABILITY

My explanation for the obsolescence of war taxes in the United States relies on the institutional development of the state's capacity for war, changes affected in the tax system and through monetary policy. The first component of my institutional change explanation, as outlined in Chapter 3, pertains to the development of a robust revenue system that alleviates the need for meaningful changes to revenue generation today. The second component of my institutional change explanation turns to the development of monetary policies that effectively neutralized inflation as a concern for the executive during peacetime but especially during periods of war. Two primary shifts in monetary policy during the 1980s had the effect of creating a price-stable economy in the United States: the central bank's move to use an inflation target as the primary mechanism for inflation stability, and its new efforts toward monetary policy transparency. These mutually reinforcing developments stabilized both inflation and the public's inflation expectations, effectively neutralizing inflation as a political concern. As a result, contemporary wartime periods in the United States have been characterized by inflation stability and have obviated the need for war taxation as an anti-inflationary policy tool.

If you recall from Chapter 2, my hypotheses regarding the development of monetary policy are:

H3: As monetary policy increases its capacity for price stability, the probability of war taxes decreases.

H4: As inflation or inflation expectations decrease (increase), the probability of war taxes decrease (increase).

This chapter seeks to substantiate that inflation has been neutralized as a primary driver for the use of war taxes. First, I provide a brief theory refresher, drawing on the framework used in Chapter 2, which explains inflation and its relationships with the economy and government spending. Next, I examine the development of monetary policy in the United States, demonstrating how changes in the Federal Reserve's monetary policy tamed peacetime inflation. Subsequently, I explore two cases of U.S. interstate war through a structured-focused comparison that underscores the historical importance of inflation in driving fiscal policy, and contrast those with the post-9/11 wars. Finally, I turn to quantitative analysis to help make the case that inflation is strongly correlated with war taxes, and that inflation stability in contemporary wars reduces the need for anti-inflationary war taxes.

Institutional Development: Monetary Policy and Inflation

I make the claim that monetary policy's capacity for price stability in the United States after 1990 largely freed the executive from the constraints imposed by an inflation-ridden economy during wartime. Improved capacity for inflation control has been such a successful institutional development that some economists characterize the contemporary period as "post-inflationary" (Rivlin 2015). This institutional change began in the late 1970s and continued into the 1980s, when central bankers developed a more

sophisticated understanding of the economy, and pursued price stability through the use of inflation targeting methods. Inflation targeting is the management of inflation using interest-rate adjustment centered on maintaining a numerical inflation-rate target or target range. The parallel effort to increase the Federal Reserve's transparency in their management of inflation solved the problem of consumers' inflationary fears as a prime driver for inflation. As a result of this institutional development, the central bank effectively neutralized inflation as an executive concern in a wartime economy that prompted the historical use of war taxes as an anti-inflationary tool.

Understanding Inflation I: Inflation and Inflation Targeting

Inflation has been a chief concern for economists and central bankers because of the belief that inflation distorts economic activity, with ruinous effects. Nevertheless, inflation is still conceptually problematic. Economics literature is replete with models that seek to mimic the relationship between key indicators of the economy—like employment and productivity levels—and inflation. Although economists have achieved some understanding of inflation, no model has performed well enough to be considered a definitive one, and economists today are still somewhat befuddled by the phenomenon of inflation. For example, the *Wall Street Journal* reported on December, 15, 2016, that the contemporary lower-than-expected inflation climate is puzzling for economists because it fails to conform with expectations about the drivers of inflation—it prompted Federal Reserve Chairwoman to note that conventional inflation models "have become a subject of controversy" (Zumbrum 2015). Consequently, there is still some uncertainty with respect to fully comprehending the drivers of inflation.

This uncertainty, however, does not preclude a salient analysis of the purported effects of inflation on the use of war taxes.[55] In general, it is policymakers' *perceptions* of significant economic issues, as well as the levers perceived to be available to them to influence the economy, that are important to their policy choices. Perceptions of an inverse and negative causal relationships between inflation and taxation are what drove counter-inflationary war tax policies before the 1990s. The coincidence of inflation and war was anticipated by both the political elite and the public on the basis of increased government spending during wartime, the diversion of labor toward the war effort reducing economic productivity, and the creation of increased demand by the government.

These inflation-during-war expectations on the part of both the elite and public are based on an understanding of two basic types of inflationary forces in a wartime economy: cost-push inflation and demand-pull inflation.[56] Cost-push inflation occurs when increases in the cost of production, for various reasons, result in higher priced goods. The producer passes on some, if not all, of the increased cost of production to the consumer, resulting in higher prices. Demand-pull inflation is understood to be a

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[55] The reasons for wartime inflation are not hypothesized to be different from peacetime inflation, but there is considerable dissent in the literature as to the exact causes of inflation and inflation stabilization. Causal explanations include: shift from reactive to anticipatory monetary policy (Estrella 2005); changes in the structure of the real economy; the deepening of financial markets; and changes in the nature of structural shocks (Stock & Watson 2007). Atkeson and Ohanion (2001) demonstrate the inaccuracy of inflation prediction models in general, suggesting a problematic understanding of the phenomenon in general. Stock and Watson's (1999) finding that all potential indicators of inflation perform relatively poorly reinforce this general understanding.

[56] I avoid the use of a price-economy model that reflects a strict Keynesian or a strict Monetary, the two principle economic philosophies of the 20th century. I elect to use a generic model because of the continued contention over the appropriate inflation model. The Phillips Curve, the predominant inflation model of the 1960s, is still arguably valid today (see footnote 8), but has been conceptually differentiated into short- and long-term curves, which use different predictors for the rate of inflation.

function of increased aggregate demand over and above any corresponding increases in aggregate supply or changes in productivity. Demand-pull inflation can result from increased competition for goods, which drives up the price of those goods, until supply levels are adjusted to demand levels. Both types of inflation can result from the economic pressures of a wartime economy. Cost-push inflation may result from the increased costs in raw material inputs to production that occur from war-related trade disruption, the increased demand for those raw materials, or the increased wages needed to compete for skilled labor (presuming no price and wage controls have been imposed). Demand-pull inflation can be anticipated based on increased government purchases of war materiel or increased business expenditures that supply the government with war-related goods and services.[57]

Price stability is also potentially influenced by the frequent expansion of the money supply in the economy during wartime. The urgent government need for credit that often occurs during wartime is usually enabled by increased central bank lending to the government, if taxes and bonds are insufficient. Government spending on goods and services creates a series of new expenditures throughout the domestic economy that can be much greater in sum than the increase in money stock created by new lending. If domestic productivity rises proportionally to the increase in expenditures, then price levels should remain stable. As is often the case in war, however, productivity may

[57] Although macroeconomic theory posits fiscal deficits cause inflation, the relationship is not confirmed in empirical analyses, except in certain cases, like that of hyperinflations (Catao and Terrones 2003; Bassetto and Butters 2010). Therefore, I avoid pointing to large deficits as a potential cause of inflationary episodes. The links between moderate inflations and deficits is more tenuous than that of hyperinflations. Sargent's (1982, 1983) study is the classic referent for this moderate inflation-deficit relationship, but Bassetto and Butters (2010, 86) note that Sargent's case study is not emblematic of the general post-World War II experience with inflation. Other studies that find a general correlation between moderate inflation and deficits (e.g. Catao and Terrones 2005), don't find the relationship in advanced economies.

decrease for one of several reasons, such as interruptions to supply chains and imports, or the diversion of commercial production to the war effort (Pigou 1941). The incommensurate increase in money supply and productivity has the effect of inducing higher prices, and potentially higher wages as well, and inflation is observed (ibid, 441).

My argument relies on the improved capacity achieved by the central bank from the 1960s to the 1990s for inflation control, primarily as a result of the adoption of an inflation-targeting framework for monetary policy, to explain the obsolescence of war taxes in the United States. Inflation targeting is a monetary policy regime that identifies and publicly commits to a numerical inflation target, most often an inflation rate or price level (Bernanke and Mishkin 1997). Typically, four features characterize an inflation-targeting regime: price stability as the primary goal of monetary policy; a public announcement of a numerical inflation target; monetary policy that takes inflation forecasts into account; and accountability mechanisms (Mishkin 2004; Heenan et al. 2006). These four often imply a fifth characteristic, which some central bankers explicitly identify as a feature of an inflation-targeting regime: transparency (Bank of England 2012). These elements work conjointly to both stabilize the rate of inflation and actors' expectations about inflation. Price stability necessitates an economic anchor—essentially a reference point around which relative economic evaluations are made. Historically, this role was performed by the exchange rate to gold, or in countries other than the United States, the exchange rate to the dollar. The collapse of Bretton Woods led to the need for new monetary policy anchors to replace exchange-rate anchors

(ibid).[58] After a brief attempt to use the supply of money as the nominal anchor, central banks moved to targeting inflation more directly, through the transmission mechanism of interest rates. An inflation-targeting approach to inflation control means that the central bank forecasts anticipated inflation rates, compares the inflation projection with the target inflation rate, and then adjusts monetary policy (i.e. often interest rates) to adjust the trajectory toward the desired rate.

While this theoretical background lays the foundation for understanding the ways in which inflation generally operates in an economy, it's important to point out that policymakers' perceptions of the efficacy of taxation as an anti-inflationary tool, rather than of the specific determinants of price-stability, were key in making decisions about wartime price stability. The 1942 statement of Randolph Paul, General Counsel of the Treasury, reflects the policymaker understanding of the relationship between fiscal policy and inflation:

> "But the battle against inflation will not be won without the enactment of measures more fundamental than any yet adopted. It will not be won without heavy reliance on fiscal weapons. Price ceilings and wage controls, by themselves, will check, but not halt, the upward course of prices. Price and wage controls will be successful only if they are buttressed by fiscal measures designed to restrict civilian spending and thereby to relieve the tremendous pressure of consumer purchasing power on prices. Such measures are an essential part of a comprehensive anti-inflation program" (Paul 1942).

Policymakers reflected perceptions of a tight link between fiscal policy and inflation. Underlying the revenue purpose of taxation was the impetus to avoid the harmful effects of paying for expenditures solely through printing money or borrowing

[58] Monetary aggregates (i.e. M1, M2, M3) were tested as nominal anchors in the 1980s, under the assumptions of Friedman's Quantity Theory of Money. As a point of contrast, rather than target inflation, this approach used money supply targets as nominal anchors in the economy.

(Blough 1944). Reducing government expenditures, reducing or limiting credit expansion, and appropriate taxation or borrowing measures constituted the chief measures for inflation control (ibid). In an inflationary economy, policymakers addressed inflation by adjusting fiscal policy to counter inflationary pressures. Because government expenditures could not be reduced during wartime, policymakers turned to taxation as a key means for inflation control. Policymakers considered taxation to be a "basic method" to reduce consumer spending income, to encourage private loans to government (due to the government's demonstrated intent to control inflation), and to discourage consumer spending in anticipation of future higher taxes (ibid).

Based on the understanding that U.S. policymakers relied on taxation to counter inflationary forces in the economy, a dampening of inflation should lead to a reduced need for taxes as a counter-inflationary tool. The central banks' achievement of price stability, triggered by 1960s and 1970s stagflation but culminating in the inflation targeting of the 1990s, has alleviated the need for executive concern about wartime inflation, and thus eliminated an impetus for wartime taxation. The central bank's success in stabilizing prices was, in part, the product of transparency efforts that stabilized the public's expectations of inflation as a component of their inflation-targeting regime. This is the subject to which I turn next.

Understanding Inflation II: Inflation Expectations

Transparency is key part of controlling prices using an inflation-targeting monetary framework. Indeed, the central features of an inflation-targeting monetary policy framework are the central bank's or government's public commitment to a

numerically specified level of inflation (i.e. an inflation "target"), and the priority that target has for monetary policy (Bernanke and Mishkin 1997). The commitment to transparency inherent in an inflation-targeting policy regime has several intended outcomes. First, transparency makes the central bank's policy intentions explicit, reducing the uncertainty inherent in economic decisions about the future (Bernanke and Mishkin 1997, 12). Second, transparency increases the potential for public debate about monetary policy by arming the public with the information necessary to evaluate the tradeoffs inherent in policy choice (ibid). Finally, transparency increases central bank accountability, by obligating it to disclose how political preferences may affect economic management. The announcement of an inflation target (i.e. a rate of inflation or narrow range) transmits the central banks intentions to the public in a manner that makes decision about the future less uncertain. Inflation uncertainties make long-term saving and investment decisions more complicated, compound the problem of price volatility, and increase the risk in price and wage contracts (ibid). A commitment to transparency provides the public with the necessary information to debate the tradeoffs inherent in proposed political solutions to economic issues. The Dincer and Eichengreen (2007) finding that central banks using inflation-targeting were the most transparent amongst the one hundred central banks sampled supports the conceptual importance of transparency to an inflation-targeting regime.

Transparency is central for its role in price stability in large part because of its capacity for conditioning expectations. Expectations are a key component of inflation dynamics because expectations of future price increases essentially create "inflation

scares" that realize inflation, negatively impacting employment, productivity, and growth (Goodfriend 1993). Consequently, monetary policy aimed at price stability would be undercut without the concomitant stabilization of expectations. Inflation expectations can drive wage and price increases, as workers seek protection against future prices, putting downward pressure on employment and profits, and stifling growth. In the 1960s and 1970s, economists began to theorize that expectations could be managed through central bank credibility (Goodfriend 2007). If the commitment to noninflationary money growth were credible, money growth, expected inflation, and actual inflation would slow together and not negatively impact employment. On the other hand, if the central bank's disinflation were not credible, then interest rates and unemployment would rise as a result of continued wage and price inflation (Goodfriend 2007: 50).

So significant are expectations to the phenomenon of inflation that inflation expectations have been identified as an independent source of economic volatility. Expectations of inflation alter the rational cost-benefit analysis that individual economic actors make about their futures. The transparency dimension of inflation management is critically important due to its role in conditioning expectations, as " many of the costs of inflation arise from its uncertainty or variability more than from its level" (Bernanke and Mishkin 1997, 12). Orphanides and Williams (2004) found that inflation-targeting makes inflation predictable and achieves greater influence over expectations. Citing their work, Bernanke (2004, 8) indicates that the "public must learn the central bank's underlying preferences regarding inflation by observing the actual inflation process." Mishkin (2007, 12) appears to validate the work of Orphanides and Williams with his assertion

that anchored inflation expectations will "have smaller effects on expected inflation and hence on trend inflation."[59] Importantly, Mishkin (2007) notes that this means the effects of any shocks on inflation are therefore minimized and not as persistent as when expectations are unanchored. The price shocks potentially created by a war context, then, can be moderated by expectations that conform to an inflation target that deviates from the shock-induced level.

The combined effect of making price stability a policy priority and conditioning expectations about inflation through an inflation-targeting framework is to make inflation a less uncertain feature of economic decision-making. Although the Federal Reserve possesses a dual mandate for price stability and full employment and is not legally bound to prioritize price stability over other objectives, it has effectively practiced inflation targeting for decades.[60] As the next section demonstrates, the evolution of monetary policy and adoption of an "implicit" inflation targeting framework effectively achieved price stability by the early 1990s and, as I argue, neutralized it as a factor for executive decision-making about war taxes.

[59] Anchored inflation expectations simply signify cognitive attachment to a particular rate of long-term inflation. Trend inflation is understood to mean longer-term inflation (Stock and Watson 2007).

[60] Numerous studies suggest that the U.S. practices de facto inflation targeting; some references mistakenly indicate the U.S. is an inflation targeter, when it is not formally one. Goodfriend (2004) uses the label "implicit inflation targeting" to describe the U.S. approach because U.S. follows the primary spirit of inflation targeting as a monetary practice, but is not bound as strictly by some of the accountability mechanisms that formal inflation targeting central banks are bound by. See Goodfriend (2004), Bernanke and Woodford (2004). For those that challenge the characterization of the United States as an implicit inflation targeter, see Kohn (2004).

Empirical Evidence

U.S. Monetary Policy: Stabilizing Inflation and Inflation Expectations

The development of monetary policy that effectively controlled inflation and stabilized inflation expectations alleviated the necessity of war taxes as a counter-inflationary wartime tool. Driven by the economically devastating impact of stagflation in the 1960s and 1970s, economists and central bankers sought to achieve greater price stability. This institutional evolution came about from the 1960s to the 1990s as economists grew more sophisticated in their understanding of the economy (Romer and Romer 2002), and as monetary policies were updated to reflect these beliefs. Monetary policy in the 1970s and 1980s, based on economists' improved comprehension of the relationships between unemployment and inflation, not only reflected this new understanding of the economy but also sought to make price stability a bigger priority. Inflation stability was eventually achieved in the 1990s, after the Federal Reserve committed to both inflation targeting as a monetary policy framework, and the transparency needed to take the public's role in inflation stability into account. This achievement of price stability has extended from peacetime into wartime periods, alleviating the need to counter inflationary pressures with war taxes.

Central bankers' evolved beliefs about how the economy functioned drove changes to monetary policy that effectively stabilized inflation, although these changes took decades to achieve their effects. American central bankers' core beliefs about how the economy functioned underwent significant evolution from the 1950s to the 1990s (Romer and Romer 2002). With respect to inflation, Milton Friedman parses these

changes in terms of three basic stages: In the first stage, the Phillips curve best described the tradeoff between inflation and unemployment; in the second stage, inflation expectations and the natural rate of unemployment shifted the Phillips curve in the short- and long-runs; and in the third stage, economists identified a positive relationship between inflation and unemployment (Macesich 2001). Economists in the 1960s believed very low unemployment was a realizable long-run goal and that there was a permanent tradeoff between inflation and unemployment; in the 1970s, expansionary monetary policy was understood to only produce higher inflation, rather than lower unemployment; finally, in the 1980s and 1990s, an improved understanding of the natural rate of unemployment led to the belief that policy *could* control inflation. A full review of the specific claims of each of these models is outside the scope of my research, but it is important to identify the central insight of this intellectual evolution: a permanently higher rate of inflation does not lead to higher growth and employment (Hammond 2012). This insight replaced the presumption of an direct employment-inflation tradeoff in the Phillip's curve, which indicated that inflation and unemployment were inversely related. High inflation was hypothesized to lead to lower unemployment, and so the central bank was compelled to make trades between inflation and unemployment levels. The debates over how well the various inflation models explain inflation, both predictively and retrospectively, are still raging in economic circles today (Stock and Watson 2007).[61]

[61] See Stock and Watson (2007) for a summary of the performance of forecasting models for U.S. inflation; Gordon (2013) on the continued validity of the Phillip's Curve; Atkeson and Ohanian (2001) on the utility of the Phillips Curve for forecasting inflation.

Over this same period, inflation expectations and psychology gained recognition as potential drivers of inflation. The Federal Reserve continued efforts toward to increasing communication and transparency, seeking to establish credibility in the control of inflation. Although the Fed suffered setbacks that delayed recognition of their credibility for price stability, by the early 1990s they had achieved relative stability in both the inflation rate and expectations of inflation levels and volatility. Prominent economists acknowledge these institutional shifts:

> "Monetary policy too has undergone dramatic transformations: the stance against inflation has become more aggressive, there have been discussions of formal or informal inflation targets, and there has been a recognition of the importance of expectations—and of expectations management—in determining the path of inflation" (Stock and Watson 2010, 1).

Despite central bankers' improved understanding of inflation, inflation continued to present a challenge for the Federal Reserve from the late 1950s to the late 1970s, when prices ratcheted upward in response to their policy adjustments. The Federal Reserve's use of "go-stop" monetary policy from the late 1950s through the late 1970s contributed to the Fed's inability to consolidate expectations about inflation (Goodfriend 2003, 3). Go-stop monetary policy was ineffective at stemming inflation expectations because it lagged behind price increases. With both a lagged response to public demand and lagged economic effects, the Federal Reserve's reactive policy sought to stimulate employment until inflation became the overwhelming public concern, at which point the Federal Reserve would halt inflation by raising interest rates, generating greater unemployment. The "go" phase of the policy cycle was characterized by Federal Reserve concerns about inflation only once inflation had become higher than its previous trend, at which point

inflation was already in evidence (Goodfriend 2003). In the "stop" phase, the Federal Reserve would use aggressive interest rate policy to dampen upward price pressures, but usually after the public's tolerance for higher interest rates had passed (ibid). The Fed's ultimate effect was to increase the volatility of both inflation and output (Goodfriend 2007; Bernanke 2004; DeLong 1997; Mayer 1998; Romer and Romer 2002). High inflation volatility meant increased variability in real interest rates and prices, impeding the ability to make sound consumption and capital investment decision (Bernanke 2004).

The Federal Reserve began to test some of the monetarist ideas that a central bank could actually control inflation through monetary policy beginning in 1979, when Paul Volcker took over the Chairmanship of the organization. "In the Volcker era of central banking, inflation was the principle threat to sustainable growth—and the central bankers had to be brave enough to raise interest rates to tame the beast and steadfast in communicating their determination to do so" (Rivlin 2015). The Fed did not meet with immediate success, despite Volcker's commitment to combatting inflation, and his efforts to transmit this commitment to the public (Lindsay et al. 1997, 2005). The Federal Reserve's credibility for price stability lagged behind its monetary policy changes well into the 1980s. The confluence of monetary tightening by the Federal Reserve with an oncoming economic recession contributed to inflation scares in 1980, 1981, 1984, and again in 1987, undermining the Federal Reserve's credibility that it possessed the capacity to control inflation. Although he was unsuccessful in stabilizing prices during his tenure, the lesson learned by the Volcker Federal Reserve was that preemptive and

aggressive interest rate adjustments could stabilize inflation expectations and effectively prevent recession (Goodfriend 2007).

As Volker's tenure came to an end and Alan Greenspan took the reins as Chairman of the Federal Reserve in 1987, a more visible, vocal commitment to price stability emerged. Greenspan's 1989 congressional testimony indicated that his intent was to establish a rate of inflation such that "the expected rate of change in the general level of prices ceases to be a factor in individual and business decisions" (Goodfriend 2007). Although Greenspan stopped short of issuing a specific inflation target—which would have implied a specific rate of inflation the central bank would seek to achieve as its primary policy goal—the underlying assumption was that monetary policy could achieve both low inflation and low unemployment without inducing a recession (Goodfriend 2007). Increasingly, economists' thinking converged around the belief that inflation was generally bad for long-term growth and economic efficiency and that countercyclical monetary policy was ineffective at stabilizing inflation at low rates (Bernanke and Mishkin 1997).

Monetary policy adjustments under Chairman Greenspan met with more success in controlling inflation during the 1990s. On the policy side, both their preemptive timing and the use of an "implicit inflation-targeting" framework (Goodfriend 2004) achieved lower and more stable rates of inflation. Greenspan's Federal Reserve preemptively moved against inflation in 1994 when an expanding economy and low federal funds rate left the economy exposed to inflationary pressures. The policy demonstrated that preemptive moves against inflation could be successful at stemming

aggregate demand without raising the unemployment rate, even though these moves raised concerns in Congress (see Goodfriend 2002: 6-7). Preemptive moves against anticipated inflation followed in 1994 to 1995, 1999 to 2000, and in 2005 to 2006 (Mishkin 2007). Inflation management by the Federal Reserve under Greenspan took the form of "implicit inflation targeting," which avoided identification of a discrete numeric target but opted for a flexible inflation-target range (Mankiw 2001; Goodfriend 2003). Former Federal Reserve Chairman Bernanke characterizes the implicit inflation regime as a "framework for monetary policy within which 'constrained discretion' can be exercised" (Bernanke and Mishkin 1997, 12). The policy framework served two important functions: that of communicating with the public and increasing accountability for monetary policy (Bernanke and Mishkin 1997). Importantly, a monetary policy of price stability is conceptually accessible to the public and therefore reinforces the stabilizing effect of the policy (Bernanke and Mishkin 1997, 13).

Alongside this shift to preemptive policy action against inflation came another important development in the management of inflation—the commitment to transparency. The parallel effort to improve policy transparency under Chairman Greenspan played an important role in stabilizing expectations of inflation. In perhaps the most significant move towards transparency the Federal Reserve had undertaken since its inception, in 1994 the Federal Reserve began announcing the federal funds rate target immediately following the Federal Open Market Committee meeting (Goodfriend 2007). By 1995, the Federal Open Market Committee had generally come to agreement

that core inflation should settle around two percent, and the Federal Reserve had finally developed a coherent monetary policy to target low inflation (Goodfriend 2007).

By the end of the 1990s, inflation scares had largely abated (Mishkin 2007; Stock and Watson 2007). Stock and Watson (2007) explain the shift by examining inflation as comprised of two components: the longer-term "trend" inflation and short-term or temporary inflation. Mishkin (2007) argues that trend inflation expectations in the United States have become anchored at a particular level, which helps moderate short-term inflation adjustments and reduce inflation persistence. The public's trend inflation expectations were unanchored during "The Great Inflation" of the 1970s and 1980s, creating greater volatility in response to shocks and causing inflation to persist longer (Mishkin 2007, 4). The American public's inflation expectations stabilized at around 2 percent in the late 1990s, after falling steadily from a high point of 7.75 percent in the 1980s and some of the 1990s (Mishkin 2007, 10).[62] The last time core inflation hit three percent was 1992 (Rivlin 2015).

Empirical evidence validates the moderation of public expectations, broadly speaking, about both the variability and the persistence of inflation in the U.S. economy. Several studies have demonstrated strong evidence of reduced quarterly and annual variability of inflation since the mid-1980s (Willis 2003). From the periods 1960-1982 to 1983-2002, the average absolute change in the volatility of the core Consumer Price Index (CPI) dropped from .32 percentage points to .12 percentage points (Willis 2003, 8).

[62] Mishkin (2007) notes, "The source is the Federal Reserve Board of the U.S. series which splices data from two surveys of expected long-run inflation: the Hoey survey of financial market participants from 1981-1989 and the Survey of Professional Forecasters from 1990 on."

Willis (2003, 8) also finds that a decline in the persistence of inflation also took place after the early 1990s, as revealed by a value of 0.90 for the period 1960-1990 and 0.77 for the period 1990-2002 (where a value of 1.0 reflects an extremely high degree of persistence).[63] The evidence suggests that inflation varies less dramatically in the more recent period and, when it does vary, it normalizes more quickly. These findings are consistent with cross-national research that finds inflation persistence is lower, and expectations better anchored in inflation-targeting countries (Levin et al 2004).

Greenspan's success using the implicit inflation-targeting framework has both secured relatively long-term inflation stability and reinforced inflation stability by anchoring inflation expectations at approximately two percent. The implication is that inflation can be, and indeed has been, actively moderated through monetary policy and the stabilizing effect this policy has on public expectations. Absent the stabilization of public expectations about inflation, the Federal Reserve's monetary policy could be undercut by inflation expectation-driven behaviors, which induce or exacerbate inflation. Monetary policy's effectiveness at stabilizing inflation at a rate of two percent signaled the Federal Reserve's capacity for both setting and maintaining the conditions for price stability. The central bank has been so successful in this endeavor that some suspect today's economy should be characterized as "post-inflationary," despite decent economic growth and job creation (Rivlin 2015). This peacetime achievement of inflation stability essentially set the conditions for stable prices that continued from peacetime to wartime contexts, neutralizing historical concerns of inflation during war.

[63] Willis (2003, 8) notes the difficulty of statistical determination of a precise identification of the timing of the change in persistence, however. Willis notes that Cogley and Sargent identified the peak of inflation persistence in 1979-1980, after which point it has declined.

Overview of Wartime Inflation

Inflation correlated to the outbreak of war in the United States has a long history that dates back to the Revolutionary War. The general relationship between war and inflation observed during the 1800s and up to World War II reflects patterns of high inflation during wartime and deflation to pre-war levels after the war (Ohanian 1998). The Revolutionary War of 1775, the War of 1812, the Mexican-American War, and the Civil War all experienced a pattern of high wartime inflation, which were mostly of the "short and intense variety" (Rockoff 2014, 40). World War I inflation extended to the post-war period, lasting right up until World War II inflation began (Rockoff 2014, 42). Korean War inflation peaked at an annual 7.9 percent in the second year of the war and then tapered off, resuming pre-war levels quickly (as a result of the implementation of heavy wartime taxation that subsidized the increase in government spending).[64] Vietnam War-era prices modestly increased in 1965 and then jumped considerably in 1973 and 1974 (Klein 1977).

The pattern of war-induced inflation varied only modestly from World War II through Vietnam, reinforcing the strong association between the two phenomena amongst the American public. From 1774 through 1950, price increases and inflation were almost an exclusively wartime phenomenon (Rockoff 2014). So common was the perception of inflation as a wartime phenomenon that peacetime inflationary episodes were considered to be anomalous. High 1970s inflation, for example, drew interest from economists as "America's only peacetime outburst of inflation" (DeLong 1997). Rockoff (2012, 284)

[64] Table of Historical Inflation Rates by Month and Year (1914-2013) (based on CPI). U.S. Bureau of Labor Statistics.

identifies only three episodes of peacetime inflation in the United States prior to the 1970s inflations, all of which he characterizes as "mild": from 1833 to 1836 prices rose about 4 percent per year; from 1851 to 1855 prices rose by similar rates; and from 1897 to 1913 prices rose by about 2 percent per year. All three of these peacetime inflations were attributed to increases in the supply of silver or gold currency.

But did inflationary fears actually contribute to the executive's decision to raise war taxes? The empirical burden is to demonstrate that American wartime presidents factored inflation concerns into their decisions to raise war revenues through taxation. Using a qualitative case study analysis, I investigate the Vietnam and Korean War cases. I select these cases because they follow the World War II establishment of the income tax system that offers a sustained, high level of revenues to the state. If the development of the income tax structure alone explained variation in the use of war taxes, then the Korean and Vietnam Wars should not have experienced war taxes. During both wars, the state was already the beneficiary of the income tax system sustained after the Second World War. Nevertheless, the state levied war taxes in both cases, suggesting another cause drove their use.

Using a structured-focused comparison, I ask two questions of the Korean and Vietnam War cases.[65] First, did concerns about inflation influence the executive's decision to use war taxes? This first question seeks to establish inflation as a primary economic concern linked to the use of counter-inflationary war taxes by looking at histories of executive decision-making and taxation. Second, is there evidence of public

[65] Structured-focused comparison is a qualitative, small-N research method developed by Alexander George (1979); see also George and McKeown (1985); George and Bennett (2005) for dealing selectively with only certain aspects of historical cases and disciplining their investigation.

concerns about inflation during wartime periods, and was this concern linked to increased wartime government expenditures? This latter question attempts to find evidentiary support for the use of war taxes to stem the public's inflationary expectations, which was also believed to contribute to inflation outcomes.

Exploring the Cases: Korea, Vietnam, and Post-9/11 Wars

Korean War

The Korean War case exemplifies both the revenue raising and inflation-fighting impetus behind raising war taxes. Just shortly after the Korean War commenced in June of 1950, the U.S. Congress passed the Revenue Act of 1950. The Revenue Act is widely classified as a "war tax," given its direct links to raising revenues for the Korean crisis and its change from a revenue reduction bill intended to cut excise taxes (Bank et al 2008; Flores-Macias and Kreps 2013; Capella et al 2014; Romer and Romer 2009). The Revenue Act was attributed with raising $6.4 billion for the war effort in the first year, and roughly $5B in the years following (Romer and Romer 2009, 24; Bank et al 2008, 112), and legislated to be a permanent increase (i.e. no sunset provision or expiration).

Two subsequent war taxes were levied later in the war, both of which sought to achieve the same ends as the 1950 Revenue Act: revenue generation and inflation prevention. The Excess Profits Tax Act of 1950, signed into law in January of 1951, created a temporary provision for a surtax on corporate income and a tax on excess profits (as compared with pre-war profit averages) designed to expire three years following the commencement of the conflict and generating roughly $3.5 billion annually (Bank et al 2008; U.S. Treasury 1951). The Revenue Act of 1951 enacted primarily

temporary increases in marginal income tax rates, capital gains, corporate profits, and excise taxes, for a total tax increase worth about $5 billion annually from 1951 through 1953 (Romer and Romer 2009, 26; U.S. Treasury 1951).

Importantly, the executive drew explicit links from all three war taxes to their role in combatting inflation. Evidence in the Midyear Economic Report of the President for 1950 cites the need for war taxes to combat "strong inflationary forces" as the "strongest weapon in preventing inflation" (Romer and Romer 2007, 23). Romer and Romer (ibid) point out that the "most heated part of the debate concerned whether the tax increase was large enough to deal with the inflation that might result from the increase in defense expenditures." Romer and Romer's qualitative analysis of tax legislation motivations leads them to conclude about the 1950 act that:

> "The quotations make it clear that both the administration and Congress understood that the increase in defense spending, holding revenues the same, would cause the economy to boom and inflation to rise. The tax increase was designed to counteract this anticipated rise and hold output growth close to normal" (Romer and Romer 2007, 24).

The two subsequent war tax bills also reflect similar concerns with inflation control, reinforcing the perception amongst the political elite that taxation was considered as an inflation-fighting policy tool. The President's Midyear Economic Report (1950) emphasized the expectation that $10 billion in increased military expenditures would put "pressure on the wage and price structure," making it "important to use fiscal and credit policies to the fullest extent feasible for the restraint of inflationary pressures" (Romer and Romer 2009, 24). The following year, the report noted (of the Revenue Act of 1951) "these new taxes are required to finance the defense effort and to help keep total spending

within the capacity of current production, so that inflation does not reduce purchasing power" (ibid, 25).

Monetary policy and the struggle between the U.S. Treasury and the Federal Reserve over the appropriate cost of U.S. debt also reflected significant concerns about inflation. President Truman's Chairman of the Council of Economic Advisors, Edwin Nourse, warned the President, "increased government spending might unleash rampant inflation," and informed military planners that "any increase in defense spending would have unacceptable inflationary consequences" (Kirshner 2007, 129-130). These inflation concerns sparked off controversy over the appropriate interests rates that reflected a struggle over the locus of control for monetary policy between the Federal Reserve and the Treasury (ibid, 134-150).

Expectations of inflation were not, however, restricted to the political elite. The early days of the Korean War met with inflation rates of approximately 20 percent, potentially triggered by public fears of renewed government rationing and a return to inflation like that of World War II (Rockoff 2012, 251). Kirshner (2007, 135) paints a similar picture of bankers as "obsessed" with defense of the dollar and wartime inflation. The tax increase in September 1950 stemmed the surge in prices by early 1951, signaling to bankers and the public alike that the "government was getting its house in order by raising taxes" Rockoff (2012, 252).[66]

[66] Taxation was not the exclusive mechanism used to combat inflation. Rockoff (2012) also points to the January 1951 price freeze as another factor in stabilizing inflation during the Korean War. Importantly, however, he notes that price controls complemented the restrictive fiscal and monetary policies pursued in parallel; once price controls were lifted, there was no spike from suppressed inflation.

Public polling data also supports the claim that the public associated increased government spending with inflation, and also anticipated inflation during the Korean War period. As aforementioned, expectations of inflation can create inflationary outcomes, as people race to purchase goods prior to prices rising, potentially contributing to governmental decisions for war taxes. December 1951 interviews of more than 1,200 national adults indicated that more than 65 percent attributed inflation to "government spending" and identified "the government" as "the most responsible for the inflation of the past few years" (ORC Public Opinion Index 1951).[67] In the same poll, 56 percent of respondents indicated that they expected "serious inflation." [68] Furthermore, the public believed that hyperinflationary circumstances, akin to that which Germany experienced after the first World War, were a possibility in the Korean War context in the United States (ORC Public Opinion Index 1951).[69]

In sum, both research queries into the Korean War case study can be answered in the affirmative. The political elite, and especially the executive, were concerned with controlling the impact of increased government expenditures on the economy through

[67] The poll asked: "Here is a list of things that are said to be causes of inflation. Which of these do you think are major causes of inflation?" The respondents identified "government spending" as the most weighty cause. The poll also asked "If you had to fix the blame on some person or group of persons, who would you say is most responsible for the inflation we have had in the past few years?" The response choices included: "the government," "Truman," "the people," "big business," "the Democrats," "unions," "politicians," "combination of many things," "Roosevelt," "international situation," "other," and "no opinion" (ORC Public Opinion Index 1951).

[68] The poll interviewed 1,236 national adults, asking the question "Do you believe we are going to have serious inflation--that is, prices going way up and the dollar buying much less, or not?" The responses were limited to: "yes," "no," or "no opinion." (ORC Public Opinion Index 1951).

[69] The poll queried, "In Germany after the first World War inflation made money so worthless than people were using it to paper their walls. That also has happened in other countries. Do you think that could happen here in the United States, or couldn't it happen here?" The responses were: "yes, could," "couldn't happen here," and "no opinion" (ORC Public Opinion Index 1951).

off-setting tax increases. The three war taxes raised during the Korean conflict explicitly addressed inflation concerns in official documents and elite statements. The political elite were not alone in their understanding of this relationship between increased government expenditures and inflation. The public similarly identified this relationship and demonstrated concern that inflation was likely during the Korean War period. This evidence offers support for the argument that, historically, war taxes were used as anti-inflationary mechanisms.

Vietnam War

The Vietnam War case provides evidence of similar drivers for the implementation of war taxes in 1966 and 1968—inflation concerns. The Tax Adjustment Act of 1966 reinstated pre-war levels of excise taxes on automobiles and telephone services (Romer and Romer 2009, 42), and accelerated corporate tax payments (Treasury 2006), generating revenue increases estimated at $0.9 billion in annual revenues, or 0.6 percent of GDP (ibid). The Revenue and Expenditure Control Act of 1968 created temporary income tax surcharges (that is, a temporary charge on the total taxes paid that would end with the war) on individuals and corporations (U.S. Treasury 2006), which raised approximately $10 billion in tax revenues annually (Romer and Romer 2009, 49).

In the case of the two war taxes associated with the Vietnam War, the executive once again explicitly linked these war taxes to controlling inflation. The Chairman of the Council of Economic Advisors, Gardner Ackley, promoted a "quick across-the-board tax increase to finance the war and keep inflation under control" (Rockoff 2012, 287). Although President Johnson would not seek tax increases in the form suggested by

Ackley, he would pursue war taxes in the form of excise taxes on transportation and telephone services to counter inflationary pressures in 1966. About the 1966 bill, Romer and Romer (2009, 42) write, "Both the *Economic Reports [of the President]* and presidential speeches made it clear that the tax increase was to prevent overheating," citing President Johnson's Annual Budget Message to Congress for Fiscal Year 1967 as a case-and-point. In the message, President Johnson stated, "Tax policy must be used flexibly. … The current situation calls for a modest measure of fiscal restraint" (ibid), suggesting that the already inflationary economy could benefit from the use of war taxes to offset these upward price pressures.

The executive made similar links between new war taxes and inflation in his messaging on the 1968 tax bill. In Johnson's Message to Congress for the Revenue and Expenditure Control Act of 1968, he noted the "spiral of ruinous inflation" that might result from the failure to raise taxes, and that this failure

> "would not avoid the burdens of financing a war. For these burdens are unescapable. But, instead of sharing those burdens equitably and responsibly - as an income tax surcharge would do - inflation, tight money, and shortages would tax the American people cruelly and capriciously" (Congressional Quarterly 1968).

Romer and Romer (2009, 48) are clear in their interpretation of the intended effect of the war tax on inflation, writing, "The motivation for the Revenue and Expenditure Control Act of 1968 was to prevent the economy from overheating." The President's Annual Budget Message to Congress for Fiscal year 1969 notes that a counter-inflationary fiscal policy is "central to any attack upon...the problem of rising prices"

(Romer and Romer 2009, 48), demonstrating an explicit link between the use of war taxes and a desired counter-inflationary outcome.

Again, as in the case of the Korean War, concerns about inflation were not limited to the political elite. The period spanning the Vietnam War is often characterized as the "Great Inflation" due to the rapidly rising price levels from 1962 to 1980, which averaged about 5 percent per annum (Rockoff 2012, 284). The public clearly identified that they were in an inflationary period, with more than 80 percent of survey respondents characterizing May 1966 as a "period of inflation" (ORC Public Opinion Index 1966). Moreover, 44 percent of those same respondents were "greatly concerned" about the "problem of inflation and rising prices" (ibid).[70] Interestingly, even though public opinion polls show general antipathy to raising taxes to combat inflation (especially when considered relative to reducing government spending), when polls were framed with explicit links to funding the Vietnam War and "checking inflation at home," the majority (51 percent) favored a "tax hike" (Harris 1967).[71] The majority of the population was still concerned with inflation in the last year of Johnson's war taxes (ORC Public Opinion Index 1968).

Not only did the public expect inflation and correctly identify inflationary periods, but they also made the same associations between government spending and price

[70] The poll asked "How concerned are you about the problem of inflation and rising prices--greatly concerned, somewhat concerned, or not too concerned? The response choices for the question were: "greatly concerned," "somewhat concerned," "not too concerned," and "no opinion" (ORC Public Opinion Index 1966).

[71] In the same 1967 Harris survey, 59 percent of 1,250 national adults surveyed indicated they "opposed" "one way to control inflation is to cut down consumer spending by raising taxes." The Nixon poll of 1969 similarly shows 59 percent against continuing the income tax surcharge as a means of controlling inflation (Nixon Poll 1969).

increases as the political elite. In a May 1966 public opinion poll, more than 60 percent of respondents favored cutting spending for federal government programs as a way to control inflation (ORC Public Opinion Index 1966), a number that grew to 89 percent by October of 1966 (ORC Public Opinion Index 1966). In August of 1967, a third of the 1,086 people polled indicated they considered the government as responsible for the inflation of recent years (ORC Public Opinion Index 1967), and in October of the same year, 73 percent favored reducing government spending to keep inflation in check (Harris 1967). In the last year of war taxes (1968), again one-third of poll respondents identified the government as the party most responsible for recent inflation (ORC Public Opinion Index 1968), and 59 percent identified "Vietnam War spending as a major cause of inflation in this country" (ORC Public Opinion Index 1969).

Like the Korean War findings, both structured-focused research questions appear to find support from the Vietnam War period. The executive and public alike were concerned about inflation and made similar associations between increased government spending and rising prices. Explicit links between war taxes and inflation suppression were made by the executive in formal policy documents and speeches. Public opinion data substantiates the public's expectations of inflation, and the public's understanding of inflation as a consequence of increased government war spending. The argument that war taxes have a historical relationship to inflation control appears to be confirmed by the evidence presented from the cases of the Korean and Vietnam Wars.

Post-9/11 Wars

The post-9/11 wars in Iraq and Afghanistan reflect altogether different drivers for tax policy, and demonstrate an absence of any concern about inflationary pressures from increased government expenditures. Not only are taxes dramatically lowered during the early days of war, due to a "philosophical" motivation that taxes should be lower (Romer and Romer 2009, 83), but they are extended at the hands of a Democratic administration. There is no mention whatsoever of worries about an overheated economy, the impact of government war spending on price levels, or inflation as a concern of the executive in any of the economic reports, speeches, or congressional documents for the post-9/11 tax bills (Romer and Romer 2009, 83-91).[72]

Even the years immediately following commencement of the post-9/11 hostilities reflect no concerns that inflation will rise or become problematic for the American economy. In 2001, 2002, 2004, and 2005, the President's Message to Congress in the Economic Report of the President does not mention inflation whatsoever. In 2003, the only mention in the Message to Congress is that inflation remains low (White House 2003). Inflation again gets a brief mention in the President's 2007 through 2009 Messages to Congress in the Economic Report of the President, but only in reference to inflation's moderate level and stability. Furthermore, the President's 2009 Message to Congress reflects sentiments expressing no interest in inflation or war taxes: "Sound economic policy begins with keeping taxes low. The tax relief enacted by my

[72] The major post-9/11 tax bills include the Economic Growth and Tax Relief Act of 2001; the Job Creation and Worker Assistance Act of 2002; the Job Growth Tax Relief Reconciliation Act of 2003; the Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010; or the American Taxpayer Relief Act of 2012.

administration was the largest in a generation. Tax rates have been lowered for every American who pays income taxes" (White House 2009).

Even after Obama's Democratic administration takes office in 2009, there is a noticeable absence of concern over the impact of increased war expenditures on rising prices in the post-9/11 war period. A review of the President's Economic Outlook for 2010, for example, the year in which President Obama extended many of the Bush administration's tax cuts (Bank et al 2008), reveals President Obama does not mention inflation at all in his message to Congress (White House 2010). This trend persist for all Messages to Congress in the President's annual Economic Report from 2010 to 2015 (White House 2010-2015), all of which were war years.

Evidence from public opinion polls support the claim that improved institutional capacities for inflation control have effectively neutralized inflation as a public wartime concern. In a Gallup poll of 1,011 national adults from October 2011—roughly one month after the 9/11 attacks and less than a week after military operations against Afghanistan commenced—only 12 percent of respondents expected inflation to "go up a lot," while 33 percent each expected it to "go up a little" or "remain the same" (Gallup Oct 2001). The poll remained essentially unchanged when conducted in January of 2002 (Gallup Jan 2002), and roughly a year after the 9/11 attacks (Gallup Aug 2002). In July of 2003, the most important economic issue facing the country was not inflation, but unemployment, by a margin of 36 percent over inflation (only 5 percent counted inflation as the most important economic issue; NBC/WSJ Jul 2003). Even in the midst of the 2007 to 2008 financial crisis, the most important economic issue facing the country was

identified as unemployment, while inflation did not even register amongst the responses (NBC/WSJ Dec 2008).

Anticipating the critique that the costs of the post-9/11 wars are insufficient, relative to GDP, to prompt price increases, I make the case that federal deficits levels are at their near-highest level historically due to high levels of government spending during this period, yet no inflation has resulted. If the U.S. government is incurring deficits that approach World War II levels and is infusing the economy with cash, through a number of mechanisms, we should expect the economy to respond in a manner similar to World War II—that is, we should expect inflation. The government's increased expenditures via quantitative easing for capital investment, for social spending, and also through increased war-related expenditures, in total, should have driven inflation up if inflation were still a cause for concern. But the evidence points toward a different relationship; one in which price stability prevails even in the face of massive increases in government spending.

In conclusion, a key driver for the use of war taxes in the past—inflation and expectations of inflation—don't register at the same levels, and in most instances, don't register at all, as a feature of the wartime economy in the post-9/11 context. The executive reflected no concerns about wartime inflation in the post-9/11 period, despite increases in government debt that were approaching World War II levels (CBO 2016). The central bank's improved capacity for inflation control seems to have obviated the need for concern about spending-induced inflation. In the next section, I'll establish that the quantitative evidence reinforces these qualitative findings.

Quantitative Analysis

In this chapter, I argue that, historically, war taxes in the United States have been used as counter-inflationary tools for the executive. War taxes constrain inflationary pressures in three ways: war taxes reduce consumer spending power by reducing the amount of discretionary income available to the taxpayer; war taxes reduced incentives for profiteers to raise prices by reducing their large profits; and war taxes reduce the need for additional deficit financing that may contribute to inflation. The stabilization of inflation and inflation expectations in the post-1990 period, however, has alleviated the need to use war taxes as a tool to combat inflation during wartime. In this section, I demonstrate that the qualitative evidence on the counter-inflationary role of war taxes is complemented by my quantitative findings.

The first part of my quantitative strategy includes a means test of inflation rates, measured in terms of change in the consumer price index, in the pre-1990 period and the post-1990 period. The second part of my quantitative strategy includes the use of logistic regression to estimate the probabilities associated with the rate of inflation and war taxes. Both tests support the argument that inflation is historically associated with war taxes, but that inflation has largely been stabilized in the post-1990 period.

Means Testing

To evaluate if the general peacetime inflation rates are lower in the period after monetary policy effectively tames inflation, circa 1990, I conduct a variance ratio test and a two-sample means test of the inflation rates (measured as percent change in the Consumer Price Index) from 1935 to 1989 and from 1990 to 2015. The expectation is

that the annual inflation rates will reflect lower averages and less variance in the latter period, based on the evolution of monetary policy and its improved capacity for inflation stability at a targeted rate. Both tests support the hypothesis that inflation stability and inflation rates improved in the period after 1990, or when the Federal Reserve's monetary policy becomes more effective. The pre-1990 mean inflation rate of 4.17 percent is significantly different from, and much higher than, the post-1990 inflation rate of 2.53 percent (Table 4.1, below). The variance in inflation rates is after 1990 is also lower (calculated as the square of the standard deviation, or 1.39) as compared with before 1990 (variance of 13.62). Empirical testing of the predictability of inflation based on economic models indicates that predictability grew considerably over the period from 1984-2004, as compared with the period from 1970-1983 (Stock and Watson 2007). Stock and Watson (2007, 10) find that the inflation forecasting error rate in the earlier period at 1.89 percent, while in the more recent period the error rate dropped to .62 percent, which seems to corroborate my findings on reduced inflation variance in the more recent period (1990-2015).

	Mean	Std Dev	*t*	*p*	N
Inflation Rate, Percent Change in CPI					
1934-1989	4.17	3.69	3.00	0.00	56
1990-2015	2.53	1.18	3.00	0.00	26

Table 4.1. Two-Sample Means Testing of Consumer Price Inflation Rates, 1934-1989 and 1990-2015.
Source: Author's own calculations.

Logistic Regression

I seek to confirm my hypothesis that increases in monetary policy's capacity for price stability will lower the probability of war taxes through regression analysis. I use a

model that estimates the effect of price inflation on the likelihood of war taxes through logistic regression. The model includes important control variables that could also potentially explain variation in the dependent variable of war taxes. Defense spending as a percentage of GDP is included in the model as it directly captures the demand for revenues directed towards a war effort. A GDP growth rate variable and its lag are used to control for increases in the revenues the state may leverage for the war. A debt-to-GDP ratio variable and a lagged debt-to-GDP variable are included to control for the possibility that debt levels are shaping the decision for war taxes. The model controls for the severity of the conflict, with the expectation that more severe conflicts create higher resource demands and therefore greater incentives for war taxes. A war onset variable is used to control for the potential "rally" around the flag effect that may incentivize the use of war taxes upon initiation of a conflict. A dummy variable indicating whether a draft was used in a given year is also included to test for potential correlations between war taxes and the use of the draft. I also include the exogenous variable of election year, which may inhibit the executive's willingness to use a war tax for fear of electoral sanctioning.

DV: war tax	Model 1	Model 2	Model 3
inctaxpgdp2	-0.189**	-0.164**	-0.165**
	-0.0733	-0.0714	-0.0744
debtgdp	-0.128	-0.173	-0.122
	-0.16	-0.143	-0.18
lagdebtgdp	0.115	0.158	0.114
	-0.142	-0.13	-0.167
defexpgdp	0.226	0.320*	0.284
	-0.187	-0.166	-0.211
inflationrate		0.398**	0.421**
		-0.171	-0.207
laginflationrate		-0.370**	-0.339*
		-0.173	-0.183
gdpgrowthrate2	0.0128	0.0217	0.0276
	-0.0141	-0.0143	-0.0186
laggdpgrowth2	0.0145		0.0212
	-0.0128		-0.0156
electionyear	0.947	1.361	1.188
	-0.898	-0.913	-0.945
severity	0.881	1.314**	0.934
	-0.675	-0.648	-0.674
waronset	1.735		1.462
	-1.512		-1.568
draftdummy	1.229		-0.1
	-1.349		-1.641
Constant	-7.235**	-9.435***	-9.900***
	-2.942	-3.065	-3.796
R^2	.44	.48	.51
Observations	116	116	116

Table 4.2. Logit Regression Results Estimating Likelihood of War Tax, 1900-2015.
Notes: All source data are annualized.
Robust standard errors listed below coefficients. *** p<0.01, ** p<0.05, * p<0.1
Source: Author's own calculations.

The results from the logistic regression support the hypotheses that both income tax and inflation are correlated with the use of war taxes (Table 4.2., above). Model 1 excludes the inflation variables to test for a correlation between income tax and war taxes, and finds a significant relationship in the expected direction. Model 1 results support the hypothesis that increased income taxes result in a lower probability for war taxes. In Model 2, the variables for inflation are included: the annualized rate of inflation (as measured by the annual change in the consumer price index), and a one-year lag of the annualized rate of inflation. Model 2 results show similar support for hypothesis two, that higher rates of inflation increase the probability of war taxes. The coefficient of the inflation variable is strongly significant in the expected direction; that is, an increase in the rate of inflation is associated with an increased probability that a war tax will be levied. The lagged inflation rate, however, produces a result that requires some additional explanation. One might expect to find a similar relationship between both the inflation rate and its lag and the dependent variable, but instead we find the opposite relationship. The lagged inflation rate variable is associated with a reduced probability of a war tax. Political leaders don't use war taxes unless the rate of inflation is high or feared to become high because raising taxes is perceived to be politically costly. These leaders are responding to the proximate inflation climate, rather than to the climate that has already passed and potentially been neutralized by the implementation of war taxes. In Model 2, the negative relationship between income taxes and war taxes is maintained at a significant level, suggesting the importance of both income tax and inflation to the use of war taxes. Model 3 provides the most complete specification, including both

income tax and inflation variables as well as all of the controls identified above. The model maintains both the direction and significance of the independent variables, reinforcing the qualitative findings that rising prices increase the probability of war taxes.

Conclusion

First, the history of wartime inflation in the United States suggests a reliable pattern between war and inflation up through the Vietnam War. Executives used fiscal policy—war taxes—as an instrument for countering upward price pressures during war, in addition to generating revenues for contemporaneous spending needs. With the evolution of monetary policy, however, and the central bank's increased capacity for price stability, inflation does not demand as much attention or policy responsiveness as in the past. Prior to the effective stabilization of inflation in the 1990s, when the Federal Reserve adopted a pseudo inflation-targeting framework, inflation rates and volatility were higher. After the "great moderation" (Bernanke 2004), inflation settled at a low and stable rate, ceasing to be a significant factor in individual and business decision-making, as Greenspan desired (Greenspan 1989). This price stability has extended from peacetime into wartime, removing inflation as a significant factor in the decision to implement war taxes.

Second, the case study evidence reviewed in this chapter supports the hypothesis that inflation is positively related to war taxes. The official documents, speeches and statements of wartime executives during the Korean and Vietnam Wars signaled their concerns for inflation, and did so specifically in the context of raising taxes. Public opinion polls also reflect a high level of concern about wartime inflation from the

American public. This concern is notably absent in the post-9/11 wartime context—inflation hardly bears mention in these documents during the Bush and Obama administrations, and barely registers in polling data. We should also consider that if there was sufficient uncertainty about the potential for inflation in the post-9/11 wartime period, these concerns would have been evident early on in the conflicts' prosecution, or in public opinion polls from the period—but they were not. The evidence points to the conclusion that inflation is no longer influential in shaping wartime fiscal policy.

Third, the quantitative analyses support the hypothesis that lower inflation reduces the probability of war taxes. Models using the inflation variable show a strong and significant correlation between increases in inflation and a higher probability of war taxes. The models that include both the income tax variable and the inflation variable are stronger (R^2 of .48 and .51) than the model that uses only the income tax variable (R^2 of .44), suggesting that the inclusion of both income tax and inflation variables offers stronger predictive potential for the outcome of interest, war taxation.

The strong and significant statistical correlation between inflation and war taxes complements the qualitative analysis that highlights the role of executive perceptions of inflation and the tools available for inflation control. Executives of the past looked to war taxes as a primary means of combatting the inflation induced by increased expenditures during wartime and the public's expectations that periods of war are most usually characterized by rising price levels. In the contemporary period of price stability, executives do not appear to consider inflation as a wartime threat, and therefore do not resort to the use of war taxes as a countermeasure.

There is significant potential for these findings to obtain cross-nationally. Inflation targeting as a monetary policy provided not just the Federal Reserve but central banks around the world with the means of increasing their credibility for price stability. Even if central banks did not formally adopt inflation targets, the global diffusion of neoliberal economic norms (Simmons et al. 2006; Chwieroth 2007) has resulted in the widespread adoption of inflation-stabilization practices, even if not formal inflation-targeting policy, with the mutually reinforcing effect of stabilizing inflation expectations as well. Consequently, political leaders outside of the United States might similarly find that inflation is no longer a major concern during wartime, and alleviates a need for war-related, anti-inflationary taxation.

The relative insignificance of inflation to executive wartime decision-making and the institutional capacity for inflation control, in general, but also in wartime, loosens the constraints on executive policy. Without worries about massive government expenditures triggering an inflationary spiral, political leaders are free to spend in a more unfettered manner. This is not to suggest that broader concerns about the economy will not serve to constrain the executive. Indeed, given the strength of findings on economic voting behavior (Downs 1957; Kramer 1971; Barro 1973; amongst others) and presidential popularity (Mueller 1970; Norpoth 1985; Beck 1991), one expects the executive to be responsive to economic conditions. Inflation stability simplifies the mix of factors that the executive must consider as critical drivers of the wartime economy, making wartime increasingly more similar to peacetime, and avoiding a need for major policy realignment during war (Mills and Rockoff 1993).

It is not a foregone conclusion that the executive will use this increased policy freedom for political pursuits that run contrary to the public interest. The premise of democratic accountability, however, suggests that checks on power serve an important role in constraining the abuse of that power. As constraints dwindle, the potential for resources to be appropriated by a more powerful executive grows. In the Conclusion, I consider that the development of these institutional capacities have not been singular. Rather, it appears the state today possesses a significant institutional resiliency for war that is less reliant on public mobilization for the war effort.

CHAPTER FIVE: CONCLUSION

The research question I posed was a narrow one: What explains the obsolescence of war taxes in the United States since the end of the Vietnam War? The end of war taxes is a puzzle given the historical regularity of their use, across wars large and small, short and long, expensive and inexpensive. William McKinley, a Republican, used war taxes to fund the Spanish-American War, even though the war was short, inexpensive, and occurred in a time of economic surplus. Today's post-9/11 wars are estimated to cost at least $1.1 trillion, if not more.[73] And yet, even as the United States continues to fight its longest war to date, no war taxes are being levied!

Not only are war taxes missing from America's war finance strategies after Vietnam, but the executive's call for paying-as-we-go through the use of war taxes is also absent. Even though Senators Biden and Kerry tried to get an amendment passed that would roll back President Bush's 2001 tax cuts for the richest Americans, the demand never came from the executive. This breaks with the past, when the executive played the key role in making demands for public support and bipartisan consensus during war. President Truman, known as a "hard money man," for example, funded nearly one hundred percent of the Korean War through war taxes (Kirshner 2007; Rockoff 2012; Goldin 1980).

[73] Daggett (2010) estimates the cost of the post-9/11 wars at $1.4 trillion in constant fiscal year 2011 dollars. Other scholars use more comprehensive methodologies and calculate the wars' costs at roughly $3 trillion (Stieglitz and Bilmes 2008).

Why do we find this shift in war taxation in the United States after Vietnam? My research suggests America's resilient institutions, some of which were dramatically changed during war, provide the executive with the capacity to pursue his foreign policy agenda absent further political action. These institutions are so robust that they have changed the purpose and structure of taxation altogether—not simply war taxes. They allow the executive to proceed with his political agenda without a concern for contemporaneous spending requirements, and to spend the revenues generated by the tax system without creating price instability. So, the state's capacity for peacetime taxation and its ability to steer monetary policy in a manner that maintains prices create the potential for an increasingly independent executive.

Although my research focused on this narrow issue of war taxes in the United States, the findings suggest important questions and a future research agenda. First, is the United States a unique case, or do these institutional development trends obtain cross-nationally? In this chapter, I map out similar cross-national institutional developments that may be indicative of a broader trend in war finance. Second, what does the development of the state's institutional capacity imply for state-society relations, and especially public mobilization behind policy? I explore this question in the context of parallel institutional developments in the United States. Finally, I consider the state of war finance research and the direction in which we might next turn. But first, I summarize my findings and what they imply.

War Taxes in the United States

Historically, war taxes figured into the state's war finance strategy for two reasons: war taxes either generated revenues for contemporaneous spending needs (Rockoff 2012; Bank et al 2008; Brownlee 1996) or counteracted inflationary pressures (Paul 1942; Blough 1944). These motives for war taxes applied up through the Vietnam War conflict, after which point the institutional capacities offered by the tax system and monetary policy alleviated a need for war taxation. War finance in the contemporary period is consequently reliant on a price-stable context and baseline tax revenues.

The end of war taxes is reflective of a larger trend in taxation away from revenue generation for contemporaneous spending needs. The structure and purpose of taxation has become less about generating revenues for immediate expenditure and more about alternative purposes, like promoting economic growth, redistributing wealth, or reducing deficits. This is why we find the majority of post-World War II tax bills to have marginal revenue effects (Rose 1985; Romer and Romer 2007; Tempalski 2006, 2013). With high and increasing baseline tax receipts that sustain the state, executives can avoid introducing unnecessary political risk by raising war taxes.

The state's revenue capacity is complemented by the central bank's capacity for price stability. Monetary policy developments in the 1970s and 1980s reflected an improved understanding of the phenomenon of inflation that culminated in the achievement of price stability. The central bank's use of inflation targeting and transparency initiatives transmitted both the price intent of the central bank and its commitment to a specific price target. Under Alan Greenspan, the Federal Reserve not

only effectively neutralized inflation as a factor in consumer spending and business investment decisions, but also as an executive concern during wartime. While inflation figured so regularly into past wartime periods that it was essentially characterized as a wartime phenomenon (DeLong 1997; Rockoff 2012), the past fifteen years of war in the United States reflect almost no concern for inflation or any fears of its potentially ruinous effects.

The capacity for pursuing war without a requirement for additional political action to generate funds or stabilize prices serves to insulate the executive from the potential scrutiny that war taxation might invite. War taxes directly link domestic policy—an issue area voters care deeply about (Holsti 1997)—with foreign policy, and therefore introduce the potential for increased public scrutiny of the executive's foreign policy actions. In avoiding war taxes, and connections they make between domestic and foreign policy spheres, the executive possesses an opportunity to create a buffer between the public and her policies. Rather than mobilize the public behind her policy objectives, she might rely on status quo capacities and pursue political action farther from the public spotlight.

From a normative perspective, this research seeks to question whether the executive's potential policy insulation from the public is a positive development. Although some research points to the salience of foreign policy for voters (Aldrich et al 2006), other research finds it less so (Rosenau 1961; Mcavoy 2006). Domestic policy, on the other hand, is generally considered highly salient for voters (Holsti 1997), even if there is a lack of consensus about the mechanisms by which that policy shapes electoral

choice. The implication is that the stronger the links between domestic and foreign policy, the more relevant foreign policy becomes for voters—the more they should care about war. In this way, war taxes might make connections sufficiently salient for voters to raise their level of interest in continued, costly warfare.

The Research Question in a Broader Empirical Context

The move away from war taxes as a regular component of America's wartime finance strategy becomes even more puzzling when one considers the potential for cross-national trends. A preliminary look at cross-national evidence is suggestive that the obsolescence of war taxes is not unique to the United States (see Figure 5.1., below). Figure 5.1. illustrates the incidence of war taxes in significant interstate wars since the 1820s.[74] The figure shows that war taxes have been a routine feature of the majority of significant interstate wars, often employed as a part of the war finance strategy by more than one actor in the conflict. The trend noticeably ceases after about 1988 (the end of the Iran-Iraq War). The timing of this trend is consistent with my explanation about the potential impact of institutional resiliency and its implications for war finance, which evolve in the post-World War II period but become fully effective—in terms of both tax system capacity and price stability—around 1990.

[74] The term significant is refers to those wars lasting longer than six months in duration.

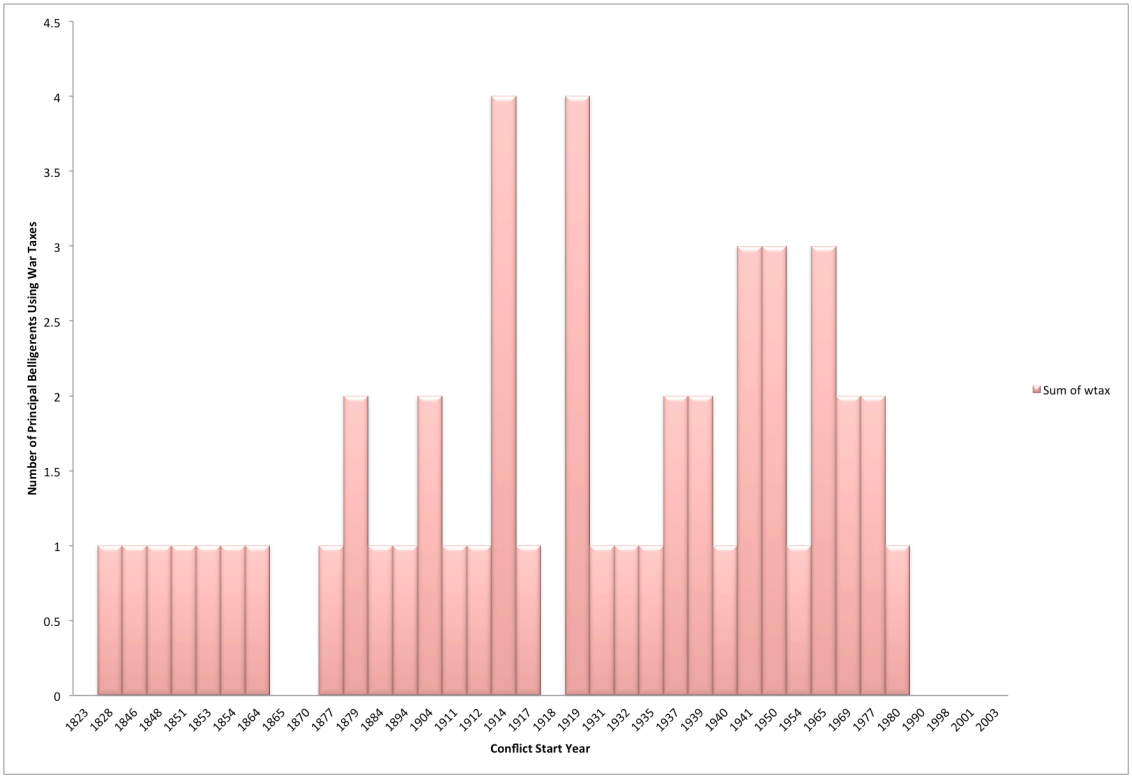

Figure 5.1. Use of War Taxes by Principal Belligerents in Interstate Wars, 1823-2003, by Conflict.
Notes: Chart reflects the number of principal belligerents in interstate wars 1823-2003 that used war taxes to finance the associated war at any point during that war. Only the conflict's start year is in annotated in the chart.
Source: Capella et al. 2014; COW v4.0, Sarkees and Wayman (2010).

Preliminary evidence suggests the cross-national shift away from war taxes could be related to similar path-dependent institutional developments in other states, even though individual states' tax structures vary considerably. The institutional development of national tax systems has rendered distinct structures and varying capacities for revenue generation based on country-specific historical circumstances. Britain's use of the property tax, for example, dates from the Poor Law Act of 1601, while its income tax hearkens back 1798, during the Napoleonic wars (Rose 1985). Evidence from the Organization of Economic Cooperation and Development is suggestive of the degree to which national tax systems vary in their structures, in terms of the quantity, type and revenue-generation capacity of various taxes. Figure 5.2. (below) starkly reflects this

variation, illustrating the wide range within which OECD states fall in terms of their use of individual income taxes as revenue sources, from 10 to above 45 percent at times. Australia, for example, has relied heavily on the use of income taxes for more than a third of their total tax revenues since the 1960s, whereas France's tax structure reflects quite the opposite. Figure 5.3. (below) similarly shows the relative impact of property tax revenues in the selected OECD states as a percentage of GDP. Again, we observe a dramatic range in the contributions of property taxes based on the cross-national variation in tax structures, as well as perturbations in economic growth. These variations reflect the path-dependent manner in which institutional development occurred even within the set of developed, western states.

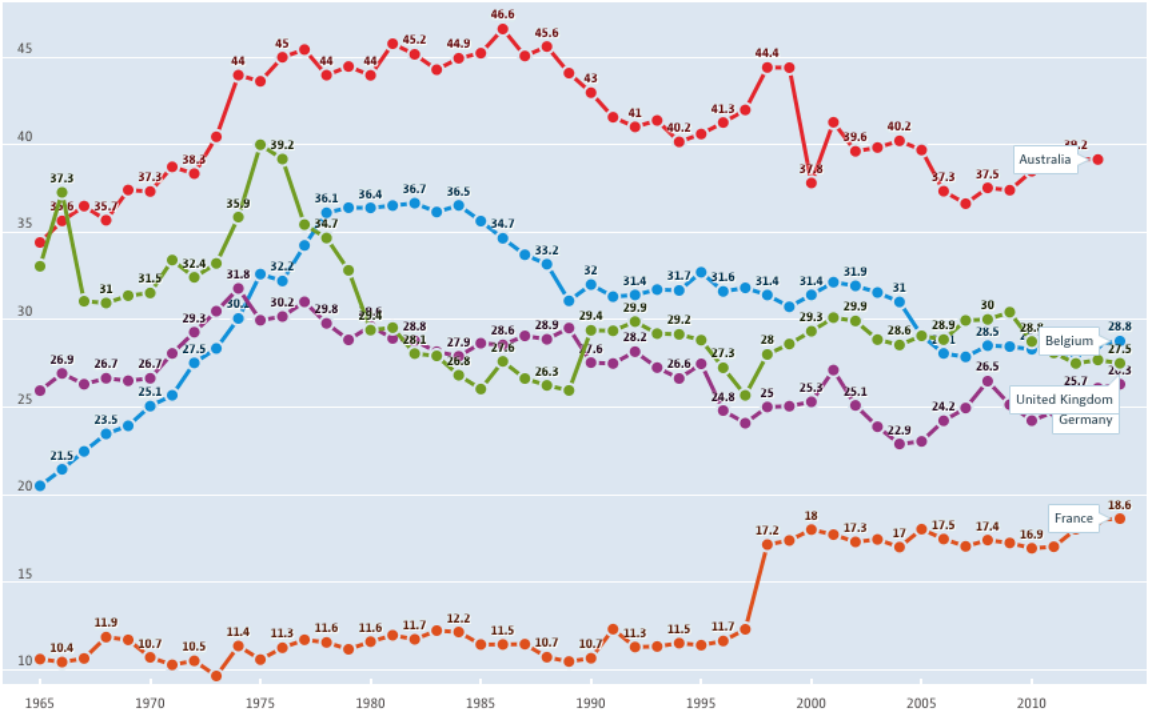

Figure 5.2. Individual Income Taxes in Selected OECD States, as Percentage of Total Tax Revenues, 1965-2014.
Notes: Tax on personal income is defined as the taxes levied on the net income (gross income minus allowable tax reliefs) and capital gains of individuals. This indicator relates to government as a whole (all government levels).
Source: OECD (2016)

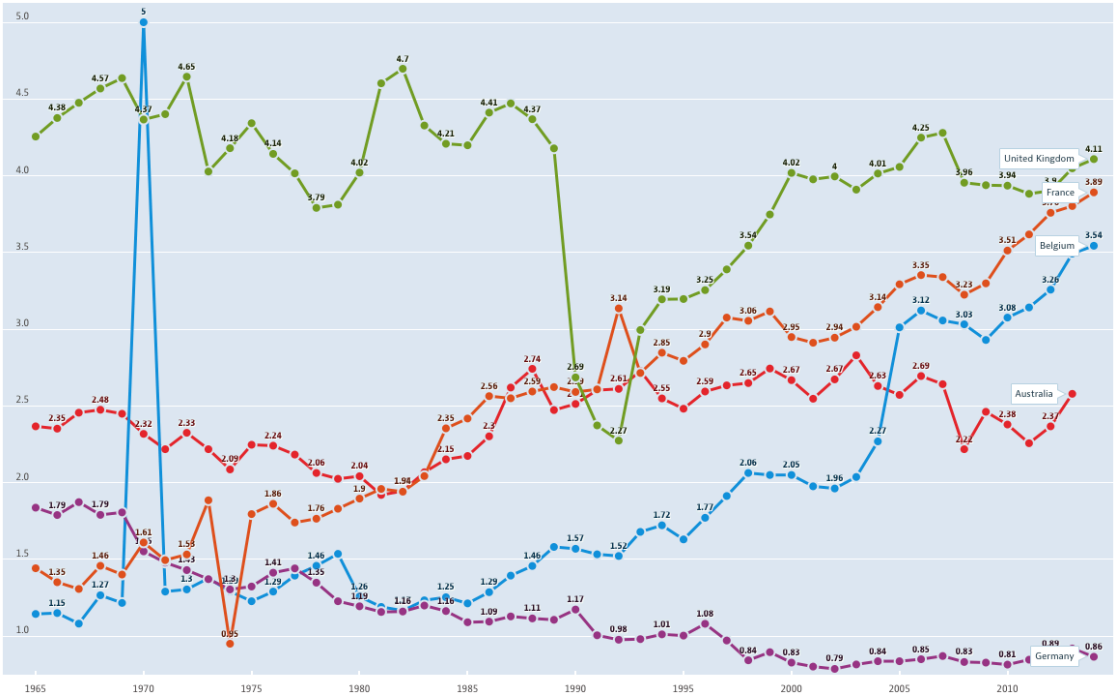

Figure 5.3. Property Taxes in Selected OECD States, as Percentage of GDP, 1965-2014.
Notes: Tax on property is defined as recurrent and non-recurrent taxes on the use, ownership or transfer of property. These include taxes on immovable property or net wealth, taxes on the change of ownership of property through inheritance or gift and taxes on financial and capital transactions. This indicator relates to government as a whole (all government levels).
Source: OECD (2016).

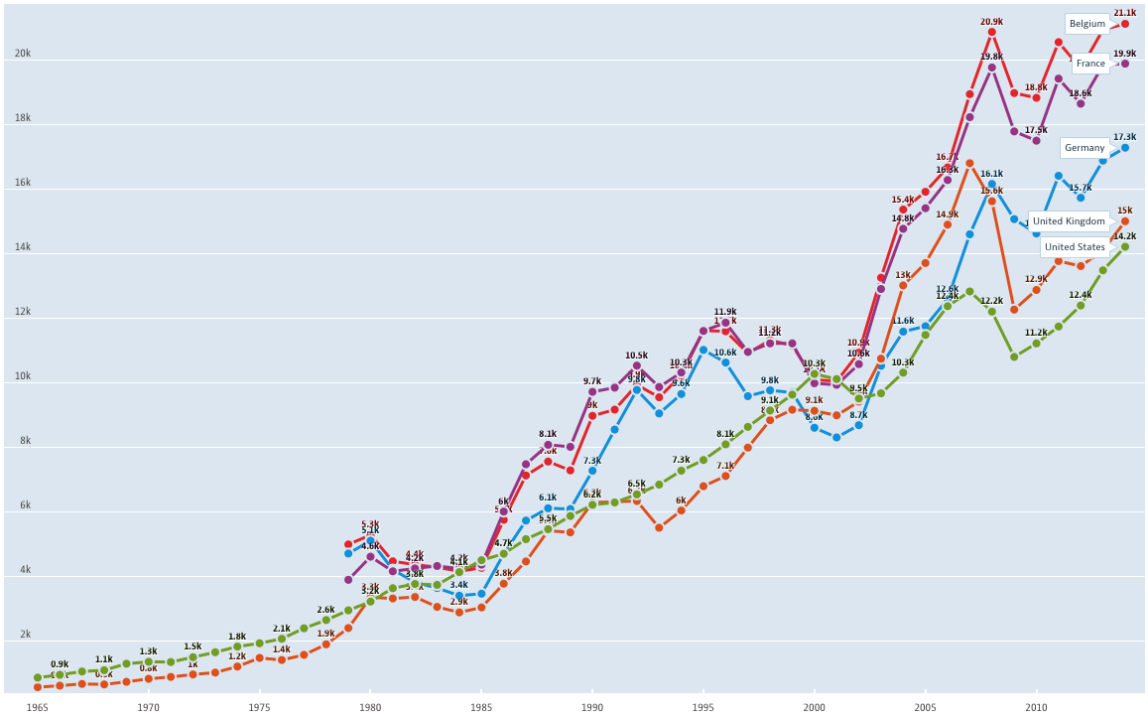

Figure 5.4. Tax Revenue in Selected OECD States and the United States, US Dollars Per Capita, 1965-2014.
Notes: Tax revenue is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes. Total tax revenue as a percentage of GDP indicates the share of a country's output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy's resources. The tax burden is measured by taking the total tax revenues received as a percentage of GDP. This indicator relates to government as a whole (all government levels) and is measured in USD, USD per capita, percentage of GDP and annual growth rate.
Source: OECD (2016).

Despite this cross-national variation in tax structures, overall revenue capacity growth and levels suggest this set of western states may have experienced a similar trajectory of institutional development to that of the United States. The revenue capacity of these states, as illustrated in Figure 5.4. (above), increased along similar lines to that of the United States from the 1960s to today. There is a noticeable uncoupling of these total tax revenues cross-nationally in 2008 that is most likely related to the global financial crisis and varied interstate strategies to cope with national economic strain. More generally, however, tax revenues amongst these selected OECD states reflect similar growth patterns in per capita terms, with some greater variation in the late-1980s to the

mid-1990s. The implication is that war taxes may have obsolesced cross-nationally for the same reasons of institutional development experienced by the United States.[75]

Cross-national obsolescence of war taxes, however, may also be explained by the rarity of interstate war amongst the developed western states, or by the international military predominance of the United States. Amongst the developed states of the West, the United States has been almost exclusively active in the prosecution of significant interstate wars since the end of the Cold War. The United States' pursuit of military objectives during this post-Cold War period has primarily occurred through coalition operations, potentially minimizing the costs for allies to contribute to the war effort. This coalition fighting structure may obscure the costs born by various participants and contribute to political decisions about war taxes.

[75] Notably, none of these states are identified by the COW v4.0 (Sarkees and Wayman 2010) as having participated in an interstate conflict of length > six months after the Vietnam War. Several of these countries, however, were key allies in the post-9/11 wars, and this participation could have potentially warranted war taxes to fund their contributions.

Country	Inflation targeting adoption date	Inflation rate at adoption date	2009 average inflation rate	Target inflation rate
New Zealand	1990	3.3	0.8	1 - 3
Canada	1991	6.9	0.3	2 +/- 1
United Kingdom	1992	4.0	2.2	2 +/- 1
Sweden	1993	1.8	-0.3	2 +/- 1
Australia	1993	2.0	1.9	2 - 3
Czech Republic	1997	6.8	1.0	3 +/- 1
Israel	1997	8.1	3.3	2 +/- 1
Poland	1998	10.6	3.8	2.5 +/- 1
Brazil	1999	3.3	4.9	4.5 +/- 2
Chile	1999	3.2	1.5	3 +/- 1
Colombia	1999	9.3	4.2	2 - 4
South Africa	2000	2.6	7.1	3 - 6
Thailand	2000	0.8	-0.9	0.5 - 3
Korea	2001	2.9	2.8	3 +/- 1
Mexico	2001	9.0	5.3	3 +/- 1
Iceland	2001	4.1	12.0	2.5 +/- 1.5
Norway	2001	3.6	2.2	2.5 +/- 1
Hungary	2001	10.8	4.2	3 +/- 1
Peru	2002	-0.1	2.9	2 +/- 1
Philippines	2002	4.5	1.6	4.5 +/- 1
Guatemala	2005	9.2	1.8	5 +/- 1
Indonesia	2005	7.4	4.6	4 - 6
Romania	2005	9.3	5.6	3.5 +/- 1
Turkey	2006	7.7	6.3	6.5 +/- 1
Serbia	2006	10.8	7.8	4 - 8
Ghana	2007	10.5	19.3	14.5 +/- 1

Table 5.1. Inflation Targeting Countries and Inflation Rate Changes, 1990-2009.
Source: IMF 2010.

The second part of my institutional development explanation about war taxation relied on the achievement of price stability, in periods of both peace and war in the United States. This change from inflation volatility and high inflation levels during wartime to relative stability may be in evidence more broadly, as well. Many economists' core beliefs about how the economy functioned underwent significant evolution in the 1960s to the 1990s (Romer and Romer 2002), as discussed in Chapter 4. In short, monetary policy adjustments during these periods were followed by the adoption of inflation targeting regimes that substantially reduced inflation levels and inflation volatility in many states in the developed West, and subsequently proliferated more widely. Bernanke and Woodford (2003, 1) write, "Countries that have adopted inflation targeting have generally experienced good macroeconomic outcomes, including

low inflation and stable economic growth...and this approach has diffused around the globe." Inflation targeting as monetary policy reflects an institutional commitment to price stability and policy transparency and accountability as two key, mutually reinforcing principles shaping policy development. The effect of this stabilization beyond the borders of the United States may have similarly curtailed the need for fiscal policy adjustment—in the form of war taxes—to stem inflationary pressures during wartime.

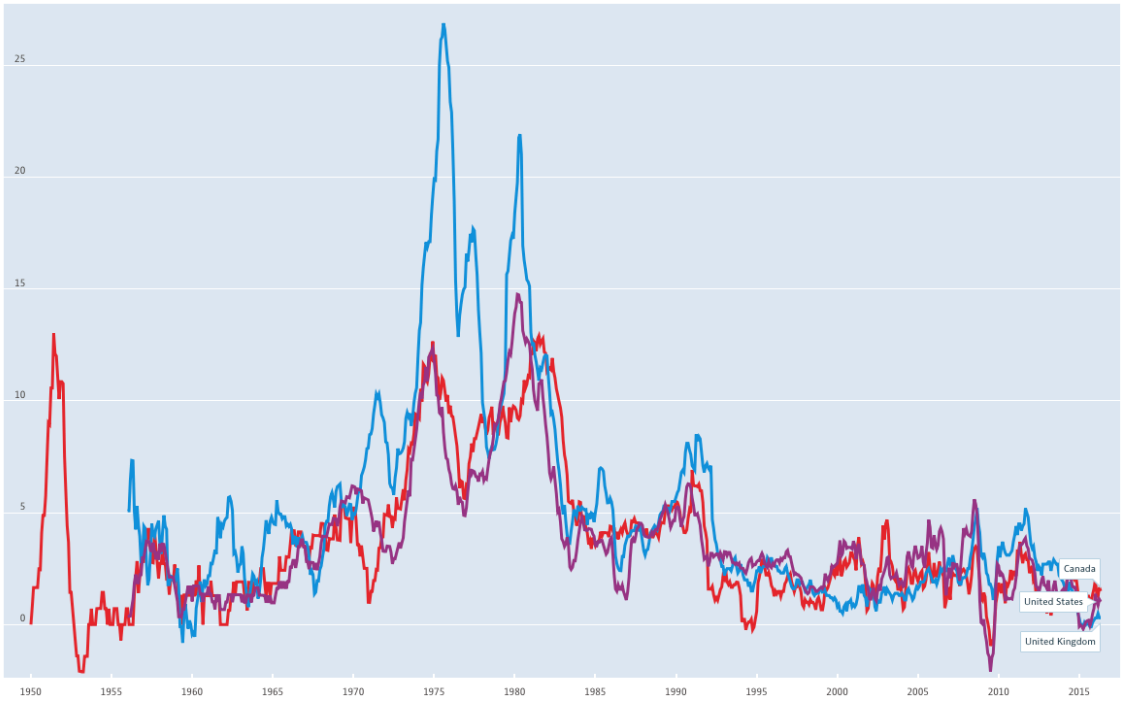

Figure 5.5. Selected Inflation Targeting Countries, Annual Total Growth Rate in Consumer Price Index, 1950-2016.
Notes: Inflation measured by consumer price index (CPI) is defined as the change in the prices of a basket of goods and services that are typically purchased by specific groups of households. Inflation is measured in terms of the annual growth rate and in index, 2010 base year with a breakdown for food, energy and total excluding food and energy. Inflation measures the erosion of living standards. A consumer price index is estimated as a series of summary measures of the period-to-period proportional change in the prices of a fixed set of consumer goods and services of constant quantity and characteristics, acquired, used or paid for by the reference population. Each summary measure is constructed as a weighted average of a large number of elementary aggregate indices. Each of the elementary aggregate indices is estimated using a sample of prices for a defined set of goods and services obtained in, or by residents of, a specific region from a given set of outlets or other sources of consumption goods and services.
Source: OECD (2016).

That inflation targeting may have contributed to the obsolescence of war taxes cross-nationally is evidenced by the comparatively stable rates of inflation in the post-1990 period. New Zealand was the first state to adopt the inflation-targeting regime following the period of monetary policy evolution of the 1960s to 1980s. As of 2008, 14 of 30 OECD countries used inflation targeting monetary policy (A. Rose 2007); in 2010, a total of 26 countries around the world had adopted the policy formally (IMF 2010). Figure 5.5. (above) reflects similar inflation patterns cross-nationally, while Table 5.1 (above) shows improved price stability across the 26 inflation targeting states from the time of policy adoption to 2009. Although this evidence is only anecdotal, it is suggestive of the potential for broader trends in monetary-to-fiscal policy linkages. Preliminary research is supportive of a tentative claim that inflation targeting in the West has proven more successful at stabilizing the price environment (Roger 2010).[76]

To close, both the development of resilient revenue structures in the developed West and increased capacity for inflation control suggests that my institutional development explanation for the obsolescence of war taxation may apply more broadly than to just the United States. Although this evidence is only preliminary, it reveals the potential for similar cross-national institutional developments to explain why war taxes no longer feature prominently in war finance strategies. Furthermore, the evidence suggests that institutional resiliency and the capacity it affords its leaders may extend to the developed West.

[76] A few caveats are in order: Although the period to which inflation targeting policy applies may appear relatively brief, from 1989 to today, in fact it is longer than the duration of the Bretton Woods monetary regime. Approximately twenty-seven countries use formal inflation targeting worldwide. Of these, nine are developed and 18 are developing economies, each of which has adopted inflation targeting policy under various inflationary conditions (Hammond 2012).

Institutional Resilience and its Implications

When my findings about institutional resiliency—and its capacity for enabling wars to proceed without additional taxation—are coupled with parallel institutional developments in the United States, an interesting potential for the detachment of political action from public mobilization results. What I mean by this is that public policy relies on some level of public mobilization to adequately resource a war effort, a level that has been relatively high in the case of U.S. wars. In this sense, public mobilization is a necessary condition for political action related to war. The flipside of this coin is the potential for public mobilization against political action—either through withdrawal of support, non-compliance, or active policy rejection—that effectively serves as a constraint on the executive's policy autonomy. The more substantial the requirement for public mobilization behind a war effort, the more capacity the public possesses to constrain political action.

A relatively high level of public mobilization has been necessary for prosecuting U.S. wars through Vietnam. All but two major wars in American history involved the use of war taxes, and still today, as I argue, wars rely on tax revenues—just not new, war-induced tax revenues. But wars can't be paid for with taxation if the public does not remit taxes—and if tax collection is going to be effective, quasi-voluntary compliance is necessary (Levi 1988). Similarly, war debts can't be subsidized by debt issuances without public debt purchases. And fighting forces cannot be raised if the public does not comply with selective service registration requirements, draft lotteries, or participate in

sufficient numbers to sustain a volunteer force. Public participation has been, and continues to be, a requisite for the generation of war resources.

But the level of public mobilization necessary for resource generation for war today is lower than in the past. As my findings suggest, status-quo tax revenues (combined with debt) supply the state with sufficient resources to prosecute wars without war-related taxes. Prior to World War II, war taxes were a necessary means of prosecuting a war effort because they supplied the revenues needed for contemporaneous spending, when those revenues weren't otherwise collected, or were subject to disruption. But with a robust peacetime revenue capacity, the state has insulated itself against potential disruptions to its war aims via the withdrawal of public compliance with resource generation activities, like taxation.

The need for public mobilization to prosecute wars of the past established a tight connection between war and its costs to the public, a connection that has grown evermore tenuous in the post-Vietnam War era. War taxes were visible, tangible reminders of the costs of war—according to Adam Smith, a key potential cause of the public's offense to war, and one that might drive public dissent.[77] In remitting war taxes to the government, taxpayers directly paid "the costs of war from their own resources," making war a "poor game" that casts its calamities upon the people (Kant [1795] 1957, 11). In contrast to these direct and tangible war costs, the bulk of U.S. taxes today are remitted to provide a general revenue capacity for the state, but are distinctly (and potentially purposefully) not tied to war. Without direct links between war and taxation, the long-standing connection

[77] Here I am referring to Adam's Smith ([1776] 1903) sentiments on the advantages of borrowing relative to taxation, as taxes were understood to generate disfavor for war. For the full quote, see Chapter 1, page 18.

between the public experience of war's costs and its role in constraining political action becomes more tenuous.

Historically, the connection between war and the public also took on more direct, visceral forms—military service taxed in blood. Not only were war taxes used to generate funds for war spending, but those funds paid the cost of raising the forces needed to prosecute the war. In the past, forces were drawn from the general population through compulsory military service, a military draft, through voluntary service often inspired by the potential for a Selective Service recall, or by way of bounty payments (Rostker 2006). Even though conscription was used somewhat infrequently in the history of American wars, it was important to all of the major wars of the 20th century.[78] Replacing conscription with the all-volunteer, standing military met with significant consternation and concern over the potential detachment of the military from the society it was supposed to protect (Ricks 1997; Feaver and Kohn 2001; Moskos et al. 2000; Moskos 2001). This parallel development in the military manpower system, from the use of a draft to a standing, all-volunteer force, also reduced the necessity of public mobilization behind the state's policies. With the end of the draft in 1973, the state no longer needs the time and administrative capacity formerly necessary for force generation. There are no call-up periods, no lotteries to hold, and no training delays. Instead, the all-volunteer force stands ready, trained, and organized for rapid, global

[78] Federal conscription in the United States was used during the Civil War (1863-1865), World War I (1917-1918), World War II (1940-1945), and the Cold War (1946-1947 and 1948-1973). In the Revolutionary War, however, the federal government relied upon state-level conscription into militias for force contributions (Rostker 2006, 19).

deployment. Compliance issues are minimized because the public is not being asked to comply with military service.

Beyond the alacrity with which the all-volunteer force can be deployed, the public is also less directly affected by the decision for war with an all-volunteer force. Given that less than one percent of the general population participates in voluntary military service, fewer families experience a direct connection to the costs of war. Similar to limited conscription during Vietnam—when the number drafted remained small, their use enjoyed broad public approval, and those who preferred to avoid service could do so with relative ease[79]—the deployment of the all-volunteer force for war is likely to arouse less public opposition than a draft system. The burden is placed upon witting volunteers, their numbers are small, and they are put to often popular ends, like combatting terrorism.[80] To all appearances, the all-volunteer force can be dispatched without the same level of political will, administrative cost, or time that the draft inevitably involved. "The all-volunteer force has proved both successful and resilient since it was established in 1973, to include the harshest test thus far of its capabilities—the last 15 years of wars in Iraq and Afghanistan" (Barno and Bensahel 2016). Rather, an all-volunteer, standing military force provides the state with a ready, capable, and efficient global power projection capacity, sans general public participation.

[79] Friedberg (2000, 179) explains that if support for one of the three draft parameters changed, then support for the draft would weaken; if multiple parameters changed, it might collapse.

[80] Although the all-volunteer military technically relies on volunteers to populate its ranks, the socioeconomic disparity in recruits to military service versus those that do not serve is often construed as an inequity, suggesting the nature of military service is less about volunteerism and more about socioeconomic necessity.

We might consider the probability that this institutional capacity for warfare necessitates relatively less public mobilization behind war policies. Does resourcing a war today require much more the executive decision to deploy the all-volunteer force? The funds are available; the force is ready; and the authority to unilaterally dispatch the force is established.[81] Especially when considered in conjunction with the detached nature of war funding and public mobilization, it appears there is relatively less need for public support for war, in general, and even less of a requirement for active public mobilization to commence a war effort. The institutional capacities available to the state in the form of the tax system, price stability, and the standing, all-volunteer force appear to work in concert to increase the potential detachment between the war, the state, and its public.

Given these probable reductions in the level of public mobilization necessary for war, the public should be considered as having relatively less capacity to constrain the executive. If compliance with war taxation isn't required for war funding needs, if war debts can be bought by foreign publics, and if military forces stand ready, then an absence of public mobilization for war hardly impacts the warfighting capacity of the state. Furthermore, there is less cause for the public to actively oppose a war because there are fewer direct links between contemporary warfighting and the public. The implication is that the state's warfighting institution is resilient—it retains a robust capacity for war even in the absence of public mobilization. This capacity for war offers

[81] Here I am referring both to the precedent that's been established in the United States to avoid formal declarations of war, which require Congressional approval, and the executive authority to deploy military force's using the War Powers Resolution of 1973. For more on the imperial presidency and insight into Congressional authority in these processes, see Fisher (2004; 2000).

the potential for significant policy autonomy for the executive, and signals an increasing detachment between the public and war.

Research Agenda: War Taxes and War Finance

The obscurity of war finance is somewhat surprising, given the centrality of war to the study of politics, and the role taxation has played in both. Research on war's costs has tended to focus on the human dimension—casualties (Gartner 2008)—and its impact on public opinion, rather than on how the financial costs of war shape public support. Increasingly, however, war finance is becoming more nuanced in its approach and developing more acute insights. I attribute this evolution to the increasingly interdisciplinary nature of war finance research. War finance researchers operate at the seams of traditional subdisciplines, drawing on the insights of political economy, security studies, public choice, international relations, and government studies.

Altogether, however, war finance researchers are still somewhat constrained by data limitations that prevent a more accurate and useful understanding of war finance. In the United States, for example, the costs of war alone are difficult to estimate because of the methods of expenditure accounting are still somewhat rudimentary, and vary by source and across time. Daggett (2010) outlines the challenges of assessing the costs of contemporary wars, which include using different cost estimate sources, disentangling the costs for war operations from the costs of military operations unrelated to but contemporaneous with war, or the lacking information on incremental costs, let alone making these estimates commensurate longitudinally.[82] Another challenge unique to the

[82] Daggett (2010) provides detailed information on the availability and type of information used to make his longitudinal war cost comparisons possible. For example, incremental data is available for the Vietnam

United States is accurate identification of the end use of appropriated funds, given the long-standing non-auditable accounting procedures of the Department of Defense.[83] While funds are appropriated to the Department of Defense through the standard budget process, there is currently no audit process to track how funds were actually expended. But even at a more macro level, the strategies of war finance are best characterized by their *ex post* qualitative histories (Cappella Zielinski 2014). Sources vary in their reliability and figures, and in many cases are unclear about the specific methods used to fund wars. The Counting the Cost of War Project is perhaps the best effort to date in attempting to capture war finance strategies both longitudinally and cross-nationally (Cappella Zielinski 2014). Even this data set, however, only offers approximate proportions of war finance by type, rather than actual figures. So, at best, contemporary research on war finance is limited in its ability to paint an accurate picture of within-case, longitudinal, and cross-national trends.

These data constraints also appear to lead to more narrow analyses of war finance, where, similar to my investigation, researchers investigate just one dimension of war finance. This technique may simply be a necessary first step in establishing some references points in our understanding of war finance, however, it precludes the kind of large-N analyses that may uncover broader trends in war finance strategies. Large-N analyses present their own problems, but are potentially useful in establishing major trend

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War and the Persian Gulf War, while estimates of post-9/11 wars come from Congressional appropriation figures and fund allocations by the Department of Defense. Belasco (2014) is another good source on these methodological challenges.

[83] The National Defense Authorization Act of 2010 mandates that the Department of Defense have auditable financial statements by 2017.

lines in the relationships between war and war finance. For example, how does credit access bear on the frequency, severity, and type of international conflicts we observe? Does this impact shift if credit is provided through domestic debt issue as opposed to international debt issue? Does international creditworthiness still act as an inhibitor to war, given the expansion of the credit economy and a high degree of capital mobility?

Although we've achieved some sophistication in our approach to war finance, data limitations have also retarded progress in understanding certain dimensions of war finance. Research on public opinion in war has tended to ignore both fiscal costs and variation in the fiscal instrument. The most recent efforts are breaking ground in this area. Flores-Macias and Kreps (2015) use original experiments in the United States and United Kingdom to test for the impact of variation in the modalities of war finance on war support, finding that public support does indeed vary according to the instrument used. In particular, war support declines by about 10 percent given the use of war taxes—a finding that appears to reinforce the aforementioned incentives for the executive to steer clear of war taxes. Interestingly, and in somewhat of a challenge to the their earlier research, Flores-Macias and Kreps (2015) findings are robust to party identification and conflict type. This means that preferences against certain forms of war taxes potentially transcend party ideologies and agendas, as well as conflict stakes, indicating that some other logics are operative.

One way to improve upon extant research on war finance and public opinion is through the expanded use of survey and interview methods. Survey data is notoriously vulnerable to issues of survey design, and so necessitates multiple and varied approaches

to somewhat reliably establish public preferences.[84] Surveying public opinion on war finance at varying levels of aggregation—at state versus national levels, or according to various demographic characteristics—should offer insights on how and why war finance preferences vary, or if they do. U.S. public opinion polls from mid-century conflicts, for example, ask detailed questions about the dollar value, or percentage of income, a respondent might be willing to contribute in the name of war. Since war taxes have obsolesced, recent polls don't make the same inquiries.

Survey data is still limited in the insights it can lend.[85] Complementing survey methods with interviews that seek to identify what logics *are* operative in purportedly non-partisan preferences on war finance will further inform our understanding of the bases of war tax attitudes. Williamson's (2015) study on American tax attitudes using interview methods, for example, identifies three values that shape the public's general tax attitudes: feelings of fellowship, satisfaction with government representation, and beliefs about work and its rewards. Do these same sentiments about taxation prevail in times of crises, like war, or does a "rally" effect change the composition or weight of the values? Interview methods might further specify the causal forces at work behind war tax attitudes, war finance preferences more generally, and how those attitudes change under different conditions.

In light of the insights my institutional capacity findings offer, future research on the connections between war finance and institutional resilience is also desirable. In

[84] A succinct overview of the potential pitfalls associated with survey methods is Visser et al (2013). It's worth noting that techniques are so advanced and considerations in survey design and measurement so numerous that an entire Oxford Handbook chapter is dedicated to its exposition; see Spector (2013).

[85] See footnote 10.

particular, a better understanding of exactly how the revenue and price stability capacities interact with different types of military manpower systems will inform more comprehensive assessments of the institutional resiliency of the state relative to its public. For example, are national publics more willing to fund smaller, more proficient standing militaries, or, given their distance from the harms of war itself, are publics less willing to do so? Does this vary according to the type of conflict, to peacetime or wartime contexts, or to the manner in which the military is funded? Furthermore, careful survey and interview data on public perceptions of individual's own investment in and concern for the all-volunteer force might allow researchers to determine if the draft and all-volunteer constructs have different implications for war tax tolerance.

Concluding Thoughts

My research effort has attempted to elucidate key factors contributing to the obsolescence of war taxes in the United States. A rich tradition—indeed, more than a tradition, a resource imperative—drove the use of war taxes in nearly every war in America's history until present day. A deviation from nearly two hundreds years rich with military activity, and in the face of one of the most lengthy and costly conflicts yet, the absence of war taxes in the post-9/11 context suggests a significant empirical puzzle is at hand: why aren't war taxes a part of the U.S. war finance strategy any longer?

The role war taxes played historically offers insights into potential explanations for their obsolescence. With low and inconsistent revenue streams, the state enabled increased wartime expenditures through the raising of war taxes. When increased expenditures resulted in rising prices, the state similarly levied war taxes to constrain

inflationary pressures. But taxes often generate disfavor with the public. Indeed, this is the very premise of early political economy and democratic peace theories, which assert that the democratic public's tolerance for war will quickly evaporate when it experiences war's calamities directly (Kant [1795] 1957; Smith [1776] 1981). Intolerant publics should therefore constrain the executive's foreign policy exploits. Should the executive be able to avoid imposing these calamities on the public, then, she might be relatively more autonomous in her foreign policy actions, or invite less scrutiny upon them.

My findings suggest that the institutional capacities the state developed for war alleviate the historical need for additional resource generation or price stability mechanisms during wartime. The development of the income tax system during World War II has played a primary role in offering the state sufficient revenue capacity for war absent the generation of additional revenues through war taxes. The later development of monetary policy that effectively stabilized prices acted in a complementary manner to expand the institutional capacity of the state and eliminate any residual functional need for a war tax as an anti-inflationary device. Together these capacities provide the resources necessary for the prosecution of war without any additional political action aimed at resource generation or inflation control.

This institutional development explanation implies that the state possesses a resilient institutional capacity for war that does not necessarily rest on public mobilization. Whereas wars of the past relied on a high level of public mobilization to fund and fight a war, the state's institutional capacity today operates more independently from public mobilization. Although my research explored only the state's fiscal and

monetary capacities for war, it is likely that the development of a standing, all-volunteer force operates in a complementary manner to reduce the level of public mobilization needed to resource war.

To clarify, I am not suggesting that no public mobilization is necessary for war. Electoral turnover is still an effective mechanism for incentivizing executive responsiveness to public preferences, both generally and in the case of war. But certainly, and even more so if "politics stop at the water's edge," the level of public mobilization necessary for generating the basic resources required for wars has been reduced. Institutional capacity provides those resources as a matter of the status quo, and therefore reduces the requirement for and the reach of public mobilization.

On the whole, then, the obsolescence of war taxes is emblematic of a broader change in the relative capacity of the state and its executive vis-à-vis its public. The more diminished the public mobilization requirement for political action, the less capacity the public possesses to constrain the state, its executive, or his policies. Policy autonomy from the public increases, and the state is more resilient in the face of public scrutiny. Under these conditions, the maintenance of an ineffective but costly and protracted war abroad becomes more comprehensible.

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APPENDIX

Table 1. Tax Changes Classified by Revenue Concept and Motivation.
Source: Romer and Romer 2007, Table 1.

	Change in Liabilities (excluding retroactive changes)				Change in Liabilities (including retroactive changes)				Present Value			
Date	SD	CC	DD	LR	SD	CC	DD	LR	SD	CC	DD	LR
1945:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1945:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-5.89	0.0	0.0	0.0
1946:1	-5.9	0.0	0.0	0.0	-5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1946:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1947:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1947:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1947:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.74	0.0
1947:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1948:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1948:2	0.0	0.0	0.0	-5.0	0.0	0.0	0.0	-10.0	0.0	0.0	0.0	-5.01
1948:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
1948:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1949:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1950:1	0.0	0.0	0.75	0.0	0.0	0.0	0.75	0.0	0.0	0.0	0.0	0.0
1950:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1950:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.23	0.0	0.0	0.0
1950:4	4.7	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1951:1	3.8	0.0	0.0	0.0	9.3	0.0	0.0	0.0	3.52	0.0	0.0	0.0
1951:2	0.0	0.0	0.0	0.0	-7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1951:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1951:4	5.4	0.0	0.0	0.0	10.0	0.0	0.0	0.0	5.42	0.0	0.0	0.0
1952:1	0.0	0.0	0.0	0.0	-4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1952:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1953:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1954:1	-3.7	0.0	0.0	0.0	-3.7	0.0	0.0	0.0	-5.0	0.0	0.0	0.0
1954:2	-1.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0	-1.0	0.0	0.0	0.0
1954:3	0.0	0.0	0.0	-1.4	0.0	0.0	0.0	-4.2	0.50	0.0	0.0	-1.41
1954:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0
1955:1	0.5	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1955:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1955:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1955:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1956:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1956:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.60	0.0	0.0	0.0
1956:3	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.89	0.0	0.0	0.0
1956:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Change in Liabilities (excluding retroactive changes)				Change in Liabilities (including retroactive changes)				Present Value			
Date	SD	CC	DD	LR	SD	CC	DD	LR	SD	CC	DD	LR
1957:1	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1957:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1958:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.50
1958:3	0.0	0.0	0.0	-0.5	0.0	0.0	0.0	-0.5	2.90	0.0	0.0	0.0
1958:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1959:1	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1959:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1959:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.59	0.0
1959:4	0.0	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
1960:1	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
1960:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1960:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.28	0.0	0.0	0.0
1961:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1961:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962:1	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1962:3	0.0	0.0	0.0	-1.35	0.0	0.0	0.0	-4.05	0.0	0.0	0.0	-1.70
1962:4	0.0	0.0	0.0	-0.9	0.0	0.0	0.0	-0.9	0.0	0.0	0.0	0.0
1963:1	0.0	0.0	2.0	0.6	0.0	0.0	2.0	3.3	0.0	0.0	0.0	0.0
1963:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1963:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1964:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-12.72
1964:2	0.0	0.0	0.0	-8.4	0.0	0.0	0.0	-16.8	0.0	0.0	0.0	0.0
1964:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0
1964:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1965:1	0.0	0.0	0.0	-4.5	0.0	0.0	0.0	-4.5	0.0	0.0	0.0	0.0
1965:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.43
1965:3	0.0	0.0	0.0	-1.75	0.0	0.0	0.0	-1.75	7.29	0.0	0.0	0.0
1965:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966:1	6.0	0.0	0.0	-1.75	6.0	0.0	0.0	-1.75	0.0	0.0	0.0	0.89
1966:2	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
1966:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1966:4	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
1967:1	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1967:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.63
1967:3	0.0	0.0	0.0	-1.6	0.0	0.0	0.0	-5.5	0.0	0.0	0.0	0.0
1967:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0
1968:1	2.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	7.89	0.0	0.0	0.0
1968:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.25	0.0	0.0
1968:3	0.0	8.5	0.0	0.0	0.0	25.5	0.0	0.0	0.0	0.0	0.0	0.0
1968:4	0.0	0.0	0.0	0.0	0.0	-17.0	0.0	0.0	0.0	0.0	0.0	0.0
1969:1	3.0	1.7	0.0	0.0	3.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
1969:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1969:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-11.72	0.0	-1.76

	Change in Liabilities (excluding retroactive changes)				Change in Liabilities (including retroactive changes)				Present Value			
Date	SD	CC	DD	LR	SD	CC	DD	LR	SD	CC	DD	LR
1970:1	0.0	-6.7	0.0	0.0	0.0	-3.1	0.0	0.0	0.0	0.0	0.0	0.0
1970:2	0.0	0.0	0.0	0.0	0.0	-3.6	0.0	0.0	0.0	0.0	0.0	0.0
1970:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1970:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971:1	0.0	-4.7	3.6	-3.8	0.0	-4.7	3.6	-3.8	2.95	0.0	0.0	-2.8
1971:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-7.98
1972:1	3.1	-1.1	0.0	-9.0	3.1	-1.1	0.0	-15.7	0.0	0.0	0.0	0.0
1972:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
1972:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.84	0.0	0.0	0.0
1972:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973:1	10.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.05	0.0	0.0	0.0
1973:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974:1	4.2	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-13.32	0.0	0.0
1975:2	0.0	-45.3	0.0	0.0	0.0	-58.1	0.0	0.0	0.0	0.0	0.0	0.0
1975:3	0.0	32.5	0.0	0.0	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0
1975:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976:4	0.0	0.0	0.0	2.4	0.0	0.0	0.0	2.4	0.0	0.0	0.0	1.61
1977:1	0.0	0.0	0.0	-0.8	0.0	0.0	0.0	-0.8	0.0	0.0	0.0	0.0
1977:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-7.10
1977:3	0.0	0.0	0.0	-7.0	0.0	0.0	0.0	-21.0	0.0	0.0	0.0	0.0
1977:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0	0.0	24.34	0.0
1978:1	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0
1978:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1978:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-18.50
1979:1	0.0	0.0	8.8	-18.9	0.0	0.0	8.8	-18.9	0.0	0.0	0.0	0.0
1979:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1979:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980:1	0.0	0.0	1.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
1980:2	0.0	0.0	0.0	8.2	0.0	0.0	0.0	8.2	0.0	0.0	0.0	15.48
1980:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1980:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981:1	0.0	0.0	17.2	4.1	0.0	0.0	17.2	4.1	0.0	0.0	0.0	0.0
1981:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1981:3	0.0	0.0	0.0	-8.9	0.0	0.0	0.0	-26.7	0.0	0.0	0.0	-125.90
1981:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	0.0	0.0	0.0	0.0
1982:1	0.0	0.0	1.5	-44.7	0.0	0.0	1.5	-44.7	0.0	0.0	0.0	0.0
1982:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1982:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.85	0.0
1982:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Change in Liabilities (excluding retroactive changes)				Change in Liabilities (including retroactive changes)				Present Value			
Date	SD	CC	DD	LR	SD	CC	DD	LR	SD	CC	DD	LR
1983:1	0.0	0.0	26.4	-57.3	0.0	0.0	26.4	-57.3	0.0	0.0	0.0	0.0
1983:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.30	0.0
1983:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984:1	0.0	0.0	12.1	-36.1	0.0	0.0	12.1	-36.1	0.0	0.0	0.0	0.0
1984:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984:3	0.0	0.0	8.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	8.0	0.0
1984:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985:1	0.0	0.0	8.8	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	0.0
1985:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1985:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986:1	0.0	0.0	4.2	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
1986:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986:4	0.0	0.0	0.0	22.7	0.0	0.0	0.0	22.7	0.0	0.0	0.0	-10.12
1987:1	0.0	0.0	0.0	-7.2	0.0	0.0	0.0	-7.2	0.0	0.0	0.0	0.0
1987:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987:3	0.0	0.0	0.0	-20.0	0.0	0.0	0.0	-20.0	0.0	0.0	0.0	0.0
1987:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.59	0.0
1988:1	0.0	0.0	26.3	-7.2	0.0	0.0	26.3	-7.2	0.0	0.0	0.0	0.0
1988:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1988:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1989:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990:1	0.0	0.0	10.3	0.0	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0
1990:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1990:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.55	0.0
1991:1	0.0	0.0	35.2	0.0	0.0	0.0	35.2	0.0	0.0	0.0	0.0	0.0
1991:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1992:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1993:3	0.0	0.0	22.8	0.0	0.0	0.0	68.4	0.0	0.0	0.0	41.64	0.0
1993:4	0.0	0.0	5.3	0.0	0.0	0.0	-40.3	0.0	0.0	0.0	0.0	0.0
1994:1	0.0	0.0	13.4	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0
1994:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1994:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1995:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

	Change in Liabilities (excluding retroactive changes)				Change in Liabilities (including retroactive changes)				Present Value			
Date	SD	CC	DD	LR	SD	CC	DD	LR	SD	CC	DD	LR
1996:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1996:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1997:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-20.30	0.0	1.93	0.0
1997:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998:1	-20.9	0.0	0.0	0.0	-20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1999:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000:1	0.0	0.0	1.7	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0
2000:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2000:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2001:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.42	0.0	-80.35
2001:3	0.0	-57.0	0.0	0.0	0.0	-171.0	0.0	0.0	0.0	0.0	0.0	0.0
2001:4	0.0	0.0	0.0	0.0	0.0	114.0	0.0	0.0	0.0	0.0	0.0	0.0
2002:1	0.0	57.0	0.6	-83.0	0.0	57.0	0.6	-83.0	0.0	-37.23	0.0	0.0
2002:2	0.0	-36.9	0.0	0.0	0.0	-110.7	0.0	0.0	0.0	0.0	0.0	0.0
2002:3	0.0	0.0	0.0	0.0	0.0	73.8	0.0	0.0	0.0	0.0	0.0	0.0
2002:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-60.64
2003:3	0.0	0.0	0.0	-126.4	0.0	0.0	0.0	-316.8	0.0	0.0	0.0	0.0
2003:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	190.4	0.0	0.0	0.0	0.0
2004:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005:1	0.0	0.0	0.0	68.1	0.0	0.0	0.0	68.1	0.0	0.0	0.0	0.0
2005:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2005:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007:1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007:2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007:3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2007:4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: SD is spending-driven; CC is countercyclical; DD is deficit-driven; and LR is long-run. The data are expressed in billions of current dollars.

Table 2. Public Opinion Polls on National Defense Spending.
Notes: Author coded polls from various sources. See source code for source identification. Green shading indicates majority or plurality public response.

		%Sample Preference for Defense Spending to						
Year	Month	Increase/ TooLittle	Decrease/ TooMuch	NoChange/ AboutRight	Other	N	Question	Source
1939	Jan	68	8	16	8	1500	.	1
1940	Jan	59	14	19	9	1500	.	2
1950	Mar	64	7	24	5	1458	.	3
1950	Dec	73	18	9	0	1361	.	4
1950	Feb	22	10	61	8	1531	.	5
1957	Feb	22	10	61	8	1531	.	6
1960	Mar	22	19	45	15	1535	.	7
1969	Jul	8	52	32	9	1517	.	8
1969	Nov	6	46	36	12	1537	.	9
1971	Mar	11	50	31	9	1561	.	10
1971	May	29	17	47	7	1506	.	11
1972	May	18	30	44	8	669	3	12
1973	Feb	11	38	45	6	1504	2	13
1973	Sep	13	46	30	12	1503	2	14
1974	Sep	12	44	32	12	1583	2	15
1974	Dec	14	42	38	6	1513	4	16
1974	Dec	13	33	47	8	1513	5	17
1976	Jan	22	36	32	9	1571	2	18
1977	Jul	27	23	40	10	1518	2	19
1978	Jan	21	26	38	16	1519	2	20
1978	Nov	34	24	34	8	1546	4	21
1978	Nov	32	16	45	7	1546	5	22
1979	Dec	34	22	33	12	1522	2	23
1980	Jan	46	14	23	17	1468	2	24
1980	Feb	64	6	23	7	1536	1	25
1980	Mar	60	8	24	8	1468	1	26
1980	Aug	58	11	25	5	1538	6	27
1980	Oct	61	6	26	7	2400	7	28
1981	Jan	65	6	23	6	2407	7	29
1981	Jan	51	15	22	12	1609	2	30
1981	Feb	63	8	25	4	1598	7	31
1981	Nov	34	47	14	5	1602	7	32
1982	Mar	19	36	36	9	1580	2	33
1982	Mar	24	25	47	4	1603	7	34
1982	Sep	17	23	58	2	1664	8	35
1982	Oct	24	34	36	6	1547	4	36
1982	Oct	22	24	52	3	1547	5	37
1982	Nov	16	41	31	12	1540	2	38
1982	Nov	15	34	47	4	1583	7	39
1983	Jan	14	45	33	8	1574	2	40
1983	Aug	14	42	35	9	1506	2	41
1983	Sep	32	18	40	10	705	8	42
1983	Sep	21	37	36	6	1533	2	43

1984	Jan	24	23	50	0	1443	7	44
1984	Jan	23	26	46	5	1600	7	45
1984	Mar	30	27	41	2	1000	9	46
1984	Oct	17	22	54	7	1809	8	47
1985	Jan	19	26	53	3	1534	10	48
1985	Jan	11	46	36	7	1528	2	49
1985	Feb	19	34	42	5	1598	7	50
1985	Feb	16	30	51	4	1533	5	51
1985	Sep	7	50	33	10	1008	11	52
1985	Oct	28	23	44	5	1000	9	53
1985	Nov	17	25	53	5	1584	7	54
1986	Jan	17	26	53	4	1581	8	55
1986	Mar	13	47	36	4	1004	2	56
1986	May	20	38	31	10	1510	12	57
1986	Oct	22	34	39	5	1585	4	58
1987	Jan	16	26	55	3	1576	7	59
1987	Apr	27	31	39	3	1004	9	60
1987	Apr	14	44	36	6	1571	2	61
1987	Oct	15	48	34	4	1002	11	62
1987	Oct	18	17	51	3	1326	8	63
1987	Oct	14	39	44	3	1553	8	64
1988	Jan	18	26	53	3	1663	8	65
1988	Jul	17	28	49	6	1177	7	66
1988	Jul	18	25	51	6	2129	7	67
1988	Oct	10	25	61	4	1518	7	68
1988	Nov	14	35	47	4	11703	7	69
1989	Jan	12	45	36	7	1500	12	70
1989	Jan	14	24	58	4	1533	8	71
1989	Jan	14	38	47	1	1010	7	72
1989	Jun	21	35	41	3	1225	5	73
1990	Jan	10	50	35	5	1226	2	74
1990	Jan	13	36	48	3	1557	8	75
1990	Jan	10	46	42	2	1044	7	76
1990	Aug	15	41	36	8	770	2	77
1990	Aug	15	41	40	4	1241	2	78
1990	Aug	23	31	43	3	1000	10	79
1991	Mar	10	26	60	4	769	2	80
1991	Mar	16	15	65	4	1252	8	81
1991	Mar	11	37	48	4	1505	2	82
1991	Aug	10	47	38	5	1018	2	83
1991	Oct	10	36	52	2	1280	8	84

1992	Oct	10	45	37	8	1854	2	85
1993	Mar	17	42	39	3	1000	2	86
1993	Sep	10	36	52	2	2000	5	87
1994	Oct	18	26	53	3	1492	5	88
1994	Oct	21	34	41	4	1492	4	89
1995	Feb	19	24	56	1	1209	5	90
1995	Feb	16	18	63	3	1190	8	91
1995	Jun	13	46	40	1	1000	13	92
1997	Aug	18	27	53	2	1202	1	93
1997	Aug	21	23	53	3	602	1	94
1997	Sep	17	24	57	2	2000	5	95
1998	Oct	30	28	38	4	1507	4	96
1998	Nov	26	22	45	7	1015	2	97
1999	May	28	32	35	5	1025	2	98
1999	Jun	31	19	47	3	1153	5	99
1999	Jul	27	16	54	3	3973	5	100
1999	Aug	34	12	47	8	1011	1	101
2000	Aug	34	14	48	4	2799	5	102
2000	Aug	40	20	34	6	1019	2	103
2000	Oct	45	8	42	5	1396	8	104
2001	Feb	41	19	38	2	1003	2	105
2001	Aug	28	14	53	5	850	8	106
2001	Oct	50	7	41	2	1281	1	107
2002	Feb	33	17	48	2	1011	2	108
2003	Feb	25	27	44	4	1001	2	109
2003	May	21	25	48	6	1012	2	110
2003	Jun	17	25	53	5	1001	4	111
2004	Mar	22	31	45	2	1002	2	112
2004	Jun	21	38	36	6	1000	2	113
2004	Dec	20	19	54	7	2000	5	114
2004	Dec	34	21	42	3	801	5	115
2005	Feb	30	30	38	2	1008	2	116
2005	Apr	20	44	30	6	1201	9	117
2006	Mar	25	32	40	3	1002	2	118
2007	Feb	20	43	35	2	1007	2	119
2008	Feb	22	44	30	3	1007	2	120
2008	Jul	31	28	40	1	1505	4	121
2009	Feb	24	31	41	4	1022	2	122
2010	Feb	27	34	36	2	1025	2	123
2012	Feb	24	41	32	3	1029	2	124
2012	Jun	20	32	45	3	1001	8	125
2013	Feb	26	35	36	3	1015	2	126
2014	Feb	28	37	32	3	1023	2	127

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